

# ORBITER

GENERAL DYNAMICS SPACE SYSTEMS DIVISION

A Biweekly Newsletter for the Employees of General Dynamics Space Systems Division

January 21, 1994

## On Our Sale to Martin

All information concerning our sale to Martin Marietta Corporation will be covered in the new newsletter, *Transition Talk*, which you should have received January 10. The *Orbiter* will continue to cover division events other than those related to the sale. •



### In This Issue

A Special Pull-out Section on Last Month's Atlas IIAS Launch... see page 3

## We've Won Another Launch Contract! Loral to Launch Satellite on IIAS

Space Systems/Loral recently announced the selection of General Dynamics Commercial Launch Services, Inc. to launch a direct broadcast satellite for TEMPO, a subsidiary of Tele-Communications, Inc. (TCI) of Englewood, CO. This contract, our first commercial one with Loral, calls for one firm launch with potential options.

The launch will be aboard our Atlas IIAS launch vehicle. This contract marks the eighth Atlas IIAS ordered, including last December's AT&T Telstar 401 launch. Total backlog for all Atlas configurations now stands at 29 launch commitments, 22 commercial and seven military.

The satellite is based on the Space Systems/Loral highly reliable FS 1300 platform, and is optimized for digital broadcast service to cable heads and home satellite dishes using video compression. •

**"This award clearly validates the attractiveness of Atlas IIAS in the marketplace. Loral has placed its trust in Space Systems Division with this award. We as an organization now need to respond to this trust with the responsible and positive build and launch of this vehicle."**

— Division President Mike Wynne

## State Honors Division's Recycling Program

GDSS has once again received accolades for our recycling program, this time from the State of California..

In a letter to Tom Edwards, our Recycling Programs administrator, California Integrated Waste Management Board Member Kathy Neal said, "The California Integrated Waste Management Board is excited to recognize your business for its excellence in environmental improvement through waste reduction.... Your dedication to reducing waste is an important link in solving California's solid waste problem. It is apparent from your application that you have worked

diligently to do your part. That hard work benefits not only your business, but each and every one of us."

To date, the office paper recycling program has saved 2,006 cubic yards of rapidly diminishing landfill space by diverting a total of 1,215,686 pounds of paper to various paper mills. •



# Employees Reap Awards for Outstanding Efforts

## Office Services Clears out Leased Space in Record Time

If you had to eliminate over 180,000 square feet of office space, would you know where to begin? The Office Services group in Facilities Management had to do just that last year, and because they completed this division consolidation task in record time, they received a Level III Best In Space Team Recognition Award from Division President Mike Wynne.

The project began in January 1993, when the group was told they had to clear out 188,000 square feet of San Diego-leased office space, which required moving 1,800 employees – all by the end of the year. By mid-year, the relocation team successfully vacated the Balboa Building and Century Park Building 3. The next major effort in the project required

completely vacating Century Park Buildings 1 and 2. But these plans were put on hold when the division's re-engineering was announced in July.

Historically, a space plan takes three months to complete, but the Office Services group had only one month to develop a new plan that supported the re-engineering effort. If the group did not get all of the Space Systems employees out of the Century Park buildings by the end of 1993, the division would



Mike Munson, Still Photography

*Facility Project managers in the Office Services department receive their Best In Space awards from Division President Mike Wynne after completing the division consolidation project in record time, saving the division from incurring lease space costs in 1994.*

incur additional lease costs of approximately \$300,000 in 1994. The pressure was on.

To develop a comprehensive plan in one month, the team analyzed the processes related to a relocation and developed more efficient ways to analyze requirement packages, prepare floor layouts, plan facility rearrangements and supervise personnel relocations. After obtaining management approvals, the group created detailed implementation schedules for relocating all Atlas/Centaur program, Titan/Centaur program and Space Magnetics program personnel.

The Office Services group successfully completed these moves with the support of AT&T; Across Town Movers; Computer Sciences Corporation; GDSS's Construction and Maintenance group; Facilities Engineering, Drafting and Information Resource Management employees; Copier Services; the locksmith; and department facility coordinators.

Without exception, all relocations were completed as scheduled, meeting all of the required objectives. Congratulations to the members of this group for finding creative ways to complete the division consolidation plan in record time. (**Editor's Note:** A listing of where division groups involved in the consolidation are now located in the Kearny Mesa facility will be published in the next issue of the *Orbiteer*.) •

## New Interface Benefits Both Division and Team

A unique cash incentive program recently earned members of a division development team an extra bonus for successfully completing a project under budget and ahead of schedule.

This team of GDSS and Computer Sciences Corporation employees worked on a new Indentured Estimating System (IES) interface that provides the Contract and Estimating (C&E) organization automated access to Manufacturing Resource Planning (MRP II) data. By suggesting alternative approaches and identifying key data conditions to be addressed in the interface, the team's work reduced the number of programming changes during testing and should minimize modifications required after installation. No significant errors were found during integration testing, mostly due to the team's efforts to define C&E's requirements upfront.

This strategic thinking enabled the MRP II/IES team to work the system \$15,000 (14 percent) under budget and approximately three weeks ahead of schedule. Both Space Systems Division and this team now benefit from this effort. For the division, the interface now gives the C&E group the capability to develop discrete estimates at the part number level with supporting data from the new MRP II system. And, because of their outstanding efforts, the team members now share cash bonuses from a \$4,000 pool. •



Ken Blum, Still Photography

*Through their innovative thinking, these members of a team that worked on a new Indentured Estimating System interface were able to complete their project \$15,000 under budget and three weeks ahead of schedule.*

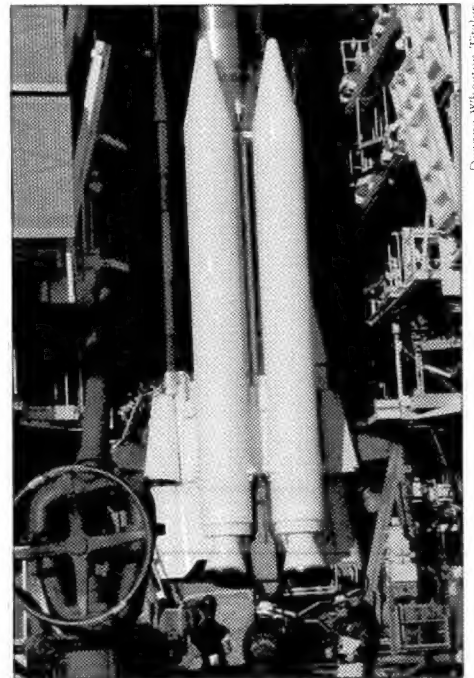
## AC-108, Our First Atlas IIAS



Alice Brown

**“A lot of people counted us out with the IIAS and the solid rocket boosters. It was the first time for us to strap on new systems, and we proved by performing above and beyond.”**

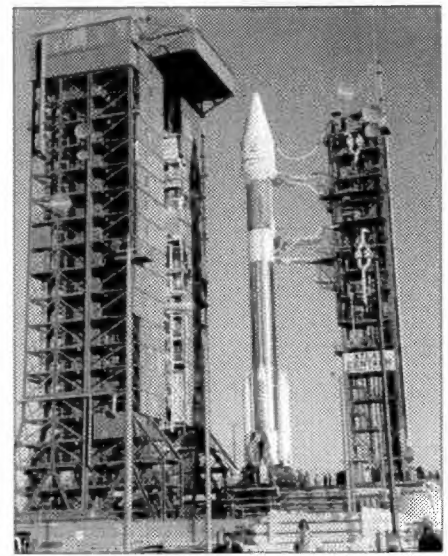
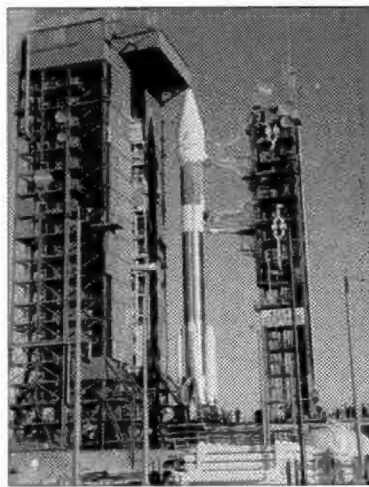
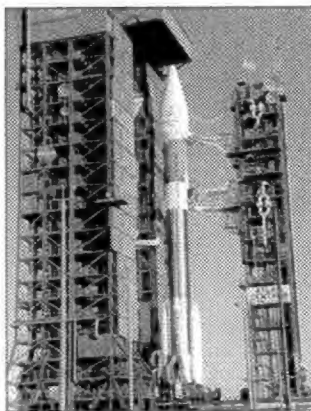
**– Troy Mann,  
Launch Service Mechanic**



Deanna Wheaton-Tizler

## The Unveiling of Our Newest Workhorse

The rollback of the tower at Space Launch Complex 36B revealed our most powerful launch vehicle to date – Atlas IIAS. With a clear, cool day as a backdrop, Atlas/Centaur 108 stood majestically awaiting its evening launch. •



photos by Deanna Wheaton-Tizler



## Remarks Heard Following the Launch:

**"If the press calls, tell them we just had a baby."**

— *Dr. Alan Lovelace, former GDSS general manager*

"I just wanted to send my congratulations to your team. All the hard work certainly paid off. My only regret is that my record for showing up on the wrong day remains unbroken. On the other hand, if that's what it takes for successful launches, I'll stay away."

— *Mark Woolley, GD corporate vice president — Strategic Planning*

"Great! You and your entire team deserve our thanks and congratulations for another wonderful performance."

— *Lester Crown, GD Board member*

# Launch Hits Mark In Every Way

Preliminary data released December 17 shows that AC-108 performed satisfactorily and the mission objective was met.

The event times (in seconds) that are listed below demonstrate how on the mark we were:

| <u>Event</u>                            | <u>Expected</u> | <u>Actual</u> |
|---|-----------------|---------------|
| Solid Rocket Booster Ignition (2nd set) | 58.6            | 58.4          |
| Solid Rocket Booster Jettison (1st set) | 70.3            | 68.6          |
| Solid Rocket Booster Jettison (2nd set) | 116.4           | 116.0         |
| Atlas Booster Engine Cutoff             | 167.5           | 167.3         |
| Booster Jettison                        | 170.6           | 170.4         |
| Payload Fairing Jettison                | 215.7           | 213.2         |
| Atlas Sustainer Engine Cutoff           | 287.1           | 291.2         |
| Atlas/Centaur Separation                | 289.0           | 293.0         |
| Centaur Main Engine Start 1             | 310.8           | 314.8         |
| Centaur Main Engine Cutoff 1            | 607.3           | 609.8         |
| Centaur Main Engine Start 2             | 1435.6          | 1434.9        |
| Centaur Main Engine Cutoff 2            | 1535.2          | 1535.8        |
| Spacecraft Separation                   | 1748.2          | 1751.6        |

## Upcoming Launches

**Titan/Centaur 12**  
**MILSTAR Satellite —**

**No earlier than February 5**

**Atlas/Centaur 73**  
**GOES Satellite — Mid-April**

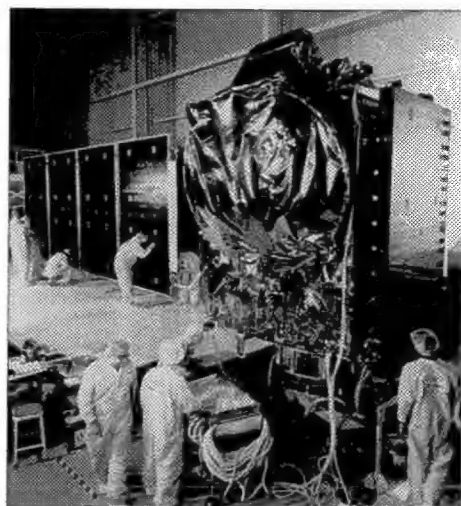
Argument of the perigee and true anomaly were less than one degree from nominal (planned) for orbit placement. Perigee height and perigee radius were less than one nautical mile from nominal and the apogee height and radius were 38 nautical miles above nominal, both having an order of magnitude of about 20,000 nautical miles.

And the best news of all is that the inclination of the orbit was about two degrees less than planned, which is considered better than planned. Net preliminary predictions of the orbit's placement indicate that the spacecraft may gain one-half to one and a half additional life years on-station. •

## Telstar 401 Gets Nice Ride, Ready for Service

AT&T's newest generation satellite — Telstar 401 — rode into space aboard AC-108 on December 15 and is now operating normally in geosynchronous orbit. The satellite will provide broadcast television, distance learning and video conferencing services to organizations nationwide, including ABC and PBS.

The Telstar 4 satellites have been designed for a 12-year mission life. To achieve this without compromising the payload size, a new thruster technology, referred to as arc-jet propulsion, was developed by NASA and first used on Telstar 401. Arc-jets are approximately twice as efficient as conventional spacecraft thrusters and therefore require about half as much fuel over the life of the satellite. •



AT&T photo



## Service Anniversaries

### November & December 1993

#### 35 Years

Patricia Bullock  
Mason Parsons  
Philip Pond  
Gerald Rehkopf  
Francis Sanderson  
Connie Smith  
Larry St. John

#### 30 Years

Hiram Snow  
Hugh Winn

#### 25 Years

Jack Edwards  
Iona Suprinski

#### 20 Years

Frank Maxfield

#### 15 Years

Sandra Bellings  
Anthony Botelho  
John Brasil, Jr.  
David Brown  
James Burnett  
Kip Chambers  
Gilbert DeCoubertin  
Darlene Dunn  
John Grando  
Kirk Isham  
Theresa Jacobs  
Foster Kimball  
Martin Kuhl  
Larry Mc Intyre  
Thomas Merrill  
Jean Powell  
Ronald Rison  
Gary Rowe  
Donna Sisk  
Michael Terrones  
Jeff Williams

#### 10 Years

Joseph Adams  
Timothy Brown  
Jose Chavez  
Jeffrey Clawson  
Donald Clute  
Robert Coburn

#### 10 Years Continued 5 Years Continued

Kevin Cope  
Douglas Dougherty  
Catherine Dowdle  
Teresa Fuentes  
John Gaines  
Eduardo Garcia  
Thomas Gorrie  
Tyson Goudey  
James Green  
Irma Jamison  
Patricia Johnson  
James Kim  
Kevin Ladner  
Thomas Lyons  
Victor Pazdziesz  
John Schlank, III  
John Shalhoub  
Clark Soulliard  
Inez Strange  
Daniel Thompson  
Robert Trometter  
Cheryl Wilburn  
Kathleen Williams  
David Wolff  
Bradley Yates

#### 5 Years

Daniel Ayala  
Dale Back, Sr.  
Thomas Bailey  
James Barrett  
Harry Bigrigg  
Daniel Bliss  
Wanda Brooks  
Giuseppe Brunetto  
Juan Cantu  
Tomas Castellanos  
Lashelle Chandler  
Gilbert Chavez  
Earnest Clark  
Richard Clark  
Ruben Contreras  
Charles Cox  
Frances DeHoyos  
Arnoldo DeLeon  
Bethina Delgado  
Samuel Estevanes

Ann Fauni  
Bjorn Forssen  
Richard Gebel  
Andrea George  
Valente Gonzalez  
Karen Hards  
Arthur Hendren  
Robert Humphrey  
John Kendrick  
Neal Kerr  
John Keyes  
Mark Kronenberg  
Leland Lafaille  
Joaquin Martinez  
Gary McCombs  
Tonichi Mendez  
Grant Mohagen  
Benjamin Montoya  
Leland Moore, Jr.  
Leon Moore, II  
Margarito Morales  
Guadalupe Moreno  
Rolando Munguia  
Arturo Navarro  
Susan Norris  
Jerry Pemberton  
David Potter  
Oscar Puente  
Rogelio Rivera  
Kenneth Roberge, Sr.  
Eloy Rodriguez  
Hipolito Rodriguez  
Luis Rodriguez  
Jose Saldana  
Richard Scott  
Francisco Silva  
Juan Silva  
Dana Smith  
David Sosa  
Yueh-Ling Su  
Gerardo Tafolla  
Janice Thompson  
Debi Ward  
Matt Wieland  
Christopher Young  
Angel Zuviera

## Classifieds

Classified Ads are free to GDSS employees and retirees. All ads should be typed or written legibly and be kept brief. Items for sale or rent cannot be listed more than two consecutive issues, and only one ad per person per issue. A new ad must be submitted for each issue as we cannot hold ads for future publication.

All ads must include your name, mail zone, work extension, and home phone number. Only home phone numbers will be printed in the ad. Exceptions: Ridesharing and lost/found item information (we will print work extensions with these ads).

**Send ads to: Orbiteer Editor,  
Mail Zone K4-5502**

Classified ad information appearing in the *Orbiteer* comes from many sources. The *Orbiteer* and the General Dynamics Corporation do not assume responsibility for or warrant the accuracy or completeness of statements appearing in these advertisements.

**NEXT DEADLINE: COB  
WEDNESDAY, JANUARY 26**

**FOR SALE:** Girl's pink & white twin size bed w/4 drawers & cupboard below bed, plus matching 2-drawer nightstand, only 3-yrs old, excellent condition, \$300; Boy's racing-style tricycle, \$25; Selectric II electric typewriter w/8 fonts, ribbon & correcting tape, \$250; Transcribing machine, uses mini-cassettes, great for transcribing lecture notes, \$100. Mike 467-9836

**RIDESHARE FROM LA MESA,** looking for carpool from Lake Murray Blvd. area of La Mesa, preference is to pay for ride. Kathy, ext. 75865 or 698-5356

## Space Briefs

**From the National Management Association** — If you attended the NMA's holiday dance in December, your photos and frames are ready for pick-up.

Lisa Jacobs is handling the distribution of these items. She is located on the 3rd floor of Kearny Mesa Building 24, Column 368A (west end), or can be reached at 41152.

**From Human Resources** — Please remember that the carpool parking spaces are reserved. These spaces are marked in white, and any violators will be ticketed.

## Employee Profile – Dick Martin



Dick Martin

The American Institute of Aeronautics and Astronautics selects individuals each year to be recognized as AIAA Fellows. These people are distinguished in their notable and valuable contributions to the arts, sciences, or technology of aeronautics or astronautics. Dick Martin, a GDSS employee in San Diego who will retire at the end of January, recently heard he has been chosen as a 1994 Fellow.

Dick is the senior technical staff member of the Research and Engineering department. He has been at General Dynamics for 43 years, beginning in 1951 when he joined Charlie Bossart's MX-1593 study team. This team's study led to the U.S. Air Force selecting the ballistic mode for inter-continental missiles and to Atlas becoming the first with production go-ahead in January 1955.

According to the AIAA, Dick was chosen as a Fellow for his "contributions to the design analysis of the Atlas ballistic missiles and launch vehicles from the preliminary designs of 1951 through the commercial space transportation vehicles of the 1990s."

AIAA is the largest professional society devoted to the progress of engineering and science in aviation and space. This year, 34 individuals nationwide will be recognized as AIAA Fellows. Dick and the other Fellows will be honored in May at the Global Air & Space '94 Conference in Arlington, VA.

Dick's photo will also appear in a supplement to the May issue of *Aerospace America* magazine. •

## Annual Rate of Return for the General Dynamics Savings and Stock Investment Plan

**RATE OF RETURN FOR THE 12 MONTHS ENDING: November**

| <u>SALARIED</u>              | <u>1991</u> | <u>1992</u> | <u>1993</u> |
|------------------------------|-------------|-------------|-------------|
| Government Bonds             | 10.6%       | 6.4%        | 5.3%        |
| Diversified Portfolio        | 20.4%       | 22.8%       | 9.8%        |
| Fixed Income                 | 10.0%       | 9.8%        | 8.9%        |
| Special Distribution Account | N/A         | 3.5%        | 4.2%        |
| General Dynamics Stock       | 113.9%      | 102.8%      | 54.5%       |

| <u>HOURLY</u>                |        |        |       |
|------------------------------|--------|--------|-------|
| Government Bonds             | 10.3%  | 6.2%   | 5.1%  |
| Diversified Portfolio        | 20.2%  | 22.8%  | 9.6%  |
| Fixed Income                 | 9.6%   | 9.5%   | 8.6%  |
| Special Distribution Account | N/A    | 2.5%   | 3.5%  |
| General Dynamics Stock       | 113.3% | 102.3% | 54.3% |

|                        |        |        |        |
|------------------------|--------|--------|--------|
| GD Stock Closing Price | 48.750 | 97.000 | 90.000 |
| Average Purchase Price | 49.631 | 97.621 | 93.990 |

All rates of return are net of plan expenses. The Rate of Return of General Dynamics Stock represents a total return, and assumes that all dividends and Special Distributions were immediately reinvested in GD shares. The Rate of Return on the account into which Special Distribution proceeds are deposited is the annualized monthly year-to-date average.

### In The Next Issue...

- **Manufacturing Resource Planning II at Kearny Mesa Building 5**



The *Orbiteer* is printed on recyclable paper. After reading, please discard in the colored paper recycle bins.

### Employment Figures

(Week Ending January 7, 1994)

|                                |              |
|--------------------------------|--------------|
| Cape Canaveral AFS .....       | 525          |
| Commercial Launch Services ..  | 31           |
| Financial Service Center ..... | 74           |
| GD Space Services .....        | 40           |
| Hammond .....                  | 49           |
| Harlingen .....                | 227          |
| Huntsville .....               | 25           |
| Property Management .....      | 8            |
| San Diego .....                | 2332         |
| Vandenberg AFB .....           | 181          |
| <b>TOTAL .....</b>             | <b>3,495</b> |

## ORBITER

The *Orbiteer*, Space Systems Division's employee newsletter, is published biweekly. Submitted articles will be printed as space permits, at the discretion of the editor. All submittals may be edited per space requirements. Send items of interest to:

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# ORBITER

GENERAL DYNAMICS SPACE SYSTEMS DIVISION

A Biweekly Newsletter for the Employees of General Dynamics Space Systems Division

February 4, 1994

## MRP II On-Line Soon at Kearny Mesa

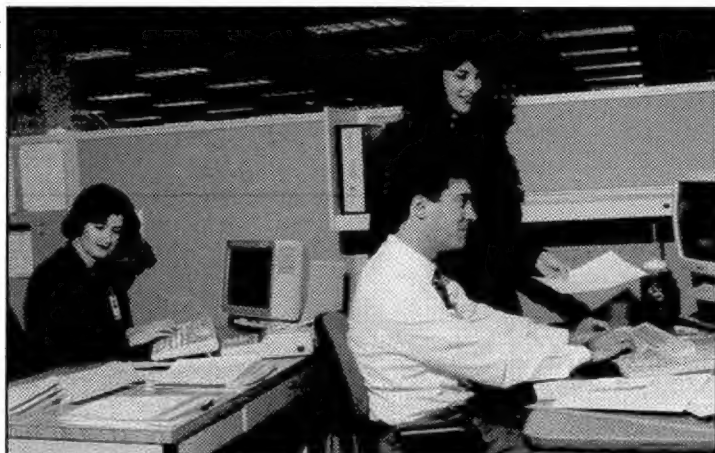
Employees at Kearny Mesa Plant 5 (also known as KM Building 5) are busy inputting the data for the conversion to Manufacturing Resource Planning II (MRP II). This system comes on-line at the facility on February 14.

Plant 5 personnel have spent several months preparing for this conversion. Part data for the three production areas of Plant 5 – Atlas Final Assembly, Atlas/Centaur and Titan/Centaur – has been entered into the MAC-PAC/D software system, which supports MRP II.

*Continued on  
page 2*

*Material Planners Anne Wolff (seated at desk, left), Roger Lamberson and Kristi Simmons convert data into the MAC-PAC/D system from the division's Legacy systems.*

Kent Schmoeker, Still Photography



## Earthquake Relief Effort

The Space Systems Division has established a special fund to help GDSS employees living in Los Angeles who have been affected by the earthquake that hit the area on January 17. These employees, some of whom represent Procurement and Quality Assurance, are trying to rebuild their lives and reestablish their households.

If you would like to donate to this special relief fund, please send your contributions to the CRA Earthquake Relief Fund at Mail Zone 50-1319. Checks must be made out to "CRA Earthquake Relief Fund" so the money can be properly distributed.

As funds come in, the money will be divided and sent to the employees. If you know of any GDSS employees living in Los Angeles who may need earthquake assistance, please contact Deanna Wheaton-Titzler at 41406. •

## Industry Information

The first Moon mission in more than 20 years began on January 25, when Martin Marietta launched a Titan II-G from Vandenberg AFB, carrying the Deep Space Program Science Experiment I spacecraft.

This spacecraft, also known as Clementine, will enter lunar orbit this month. This mission's primary purpose is to flight-qualify more than 20 advanced, lightweight technology systems and components, according to Martin Marietta.

Clementine will spend two months obtaining images of the Moon. The spacecraft then will conduct two Earth and one lunar flyby maneuvers before its August 1994 flyby with the asteroid Geographos. •

*Continued on page 5*



Mike Gruszczynski

## In This Issue

Part one of a two-part series on Mike Gruszczynski's trip to Russia... see page 3



## Kearny Mesa Manufacturing Resource Planning II

Continued from page 1



Photo above: Hydie White, MRP II Conversion team leader, briefs the Plant 5 management team meeting on the conversion status.

Photo at right: Robert McBride and John Branscom of Shop Floor Control inquire and move parts that are already in the MAC-PAC/D system.

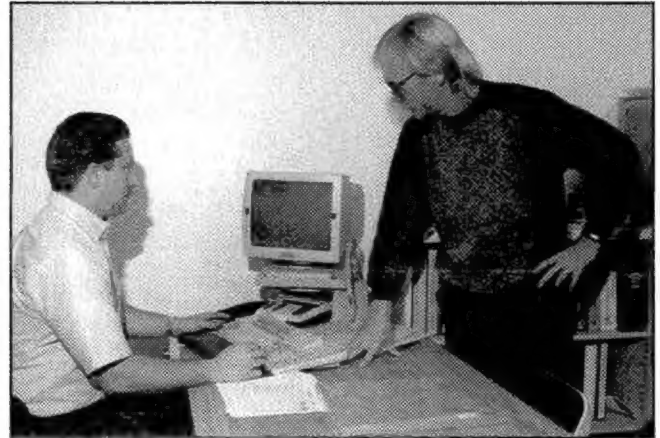


Photo above: John DeDonato and Gloria McDaniel of Inventory Control enter inventory control transactions into the system, updating inventory balances and maintaining 98 percent inventory accuracy for the conversion.

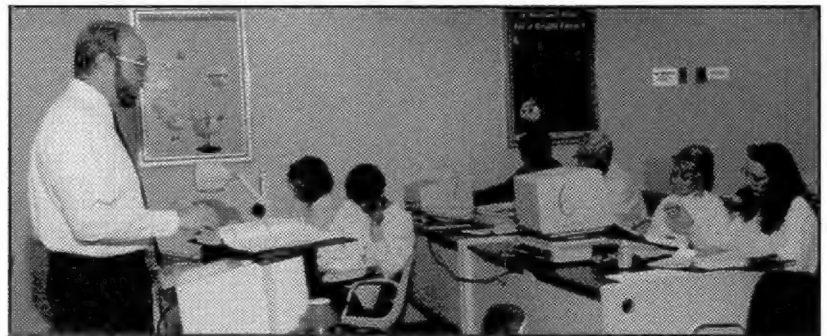


Photo above: Receiving and stockroom personnel learn about part transfer transactions under the MRP II system from Material Planner Mark Poynter.

all photos by Kent Schnoeker, Still Photography

## A Security Reminder: Car Theft Can Be Prevented

The Security department wants all employees to know that we continue to experience vehicle thefts and attempted thefts in our parking lots. Statistics show professional car thieves can break into a vehicle and drive off in less than two minutes.

There are ways to deter these thefts:

- Contact the Emergency Control Center (ECC) if you see unusual incidents or suspicious individuals in the parking lots. (Kearny Mesa ECC: 73101/ Plant 19 ECC: 26556).
- Be sure to lock your vehicle and completely roll up all windows.
- If your car does not have an alarm, use a steering wheel lock bar device.
- Do not leave personal belongings such as cameras, tapes, purses, athletic equipment and tools in plain view.
- If possible, use a car cover with a lock.

The Security department would also like you to contact the ECC if you are leaving your vehicle on company property overnight or if you are going to have anyone work on it while it's on company property. Remember, it doesn't always happen to the other guy! •

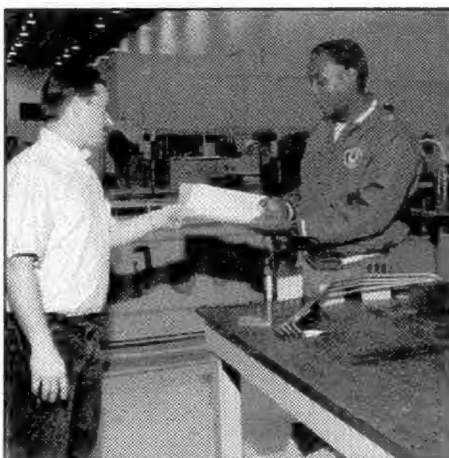
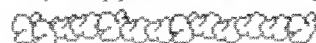


Photo above: Robert McBride hands off parts controlled through the MAC-PAC/D system to Dispatcher Conwell Avant.

# A Russian Experience – Part I

## Testing the IIAS in Russia

Most Space Systems engineers who have to monitor testing for upcoming launches only have to travel somewhere in the United States. But Mike Gruszczyński, a senior engineering specialist in Atlas Launch Vehicle Systems, travelled farther than that for Atlas IIAS testing last year – all the way to Russia.

Mike was involved in testing a 1/20th scale Atlas IIAS model with a working hot-fire propulsion system. This testing was held at the Central Aerohydrodynamics Institute in the town of Zhukovsky, 30 minutes outside of Moscow by electric train. Engineering Director Don Nirschl set up this testing, which occurred over a three-month period at the end of last year.

Test setup for the program occurred in June, with the actual testing conducted from the beginning of October through late December. Real-time results of this testing were sent to back to Space Systems before the launch of Atlas AC-108 on December 15. Design, fabrication, test setup and testing were accomplished in a record nine months.

This flight institute is well known for its wind tunnels, and, according to Mike, is the main Russian flight institute for testing anything that has ever flown in Russia. Testing at this facility cost us less than one-third what it would have cost in the United States and took less time.

"Everything for this test, including the model fabrication, was done in Russia," Mike said. "GD wrote the test plan and gave them drawings of the vehicle. There were a lot of security issues involved, including getting approval by the U.S. State Department. But it was approved. Everything we gave them was in English, and they had it translated."

To prepare for his trip, Mike took a semester of Russian at Mesa College and had a couple of tutoring sessions in Russian conversation. This made communication for him a little better, but he had a translator with him at the institute most of the time.

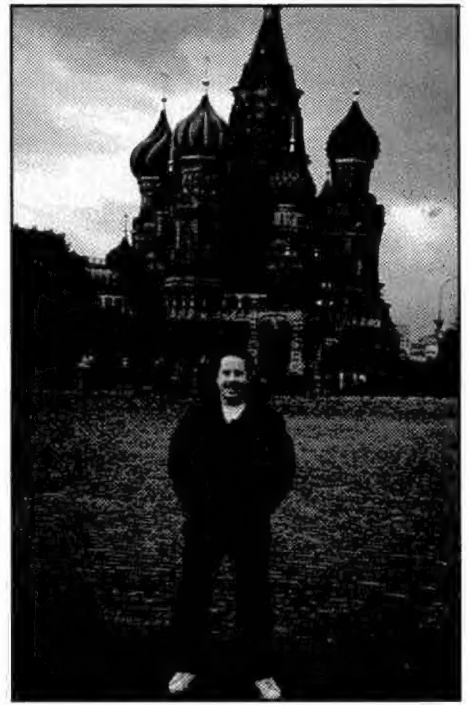
Mike was present whenever testing was conducted, which could be at any hour. The engineers conducting the tests worked six days a week, 14 to 16-hour days.

"I always had to be present," Mike commented. "You really had to be there when they did anything because communicating in person was the only way to deal with problems and set priorities in real time. The testing went fine, but the schedule would have slipped if someone hadn't been there to answer questions. Critical testing needed to be completed before the launch. Even they couldn't believe they finished in time. I'm very impressed with the schedule they met."

The Russians said this was the most complicated model they had ever tested. And according to Mike, it may be the most complicated one ever tested in aerospace. •

## NEXT ISSUE: PART TWO – LIFE IN RUSSIA

all photos supplied by Mike Gruszczyński



*Senior Engineering Specialist Mike Gruszczyński spent three months in Russia, overseeing testing on an Atlas IIAS model there. Here, he poses in front of St. Basil's Cathedral in Moscow's Red Square.*



*Photo above: This plane marks the entrance into the town of Zhukovsky, where the testing was held.*

*Photo at left: This street scene typifies life in Moscow. Mike says temperatures were often below freezing during his trip.*

# PRIDE Program Reaps Winners

Because of their active involvement in the safety process, three San Diego employees recently were awarded prizes by the Safety and Health department.

The division's PRIDE (Prevention of Recordable Injuries by Dedication to Excellence) program was created to promote safety on the job. San Diego departments that participate in the program receive points based on the following criteria:

- 1) Improvement in department's OSHA incidence rate
- 2) Supervisor's attendance at monthly Safety committee meetings
- 3) Employee attendance and participation in department safety meetings
- 4) Timely and thorough accident investigations

Quarterly, these points are added up and employees in the winning departments receive awards such as PRIDE t-shirts, sports bottles and fanny packs. At the end of the year, the names of the employees in the winning departments are entered in a grand prize drawing.

Three names were drawn for 1993's prizes:

- Richard Scott of Kearny Mesa Plant Operations Core Services, winner of a 19-inch color television
- Keith Boman of Plant 19 Tool Manufacturing, winner of a four-head VCR
- Tom Harris of Kearny Mesa Facility Services, winner of a cordless telephone

All employees who participate in the PRIDE program are congratulated on their contributions, which made it possible for GDSS to record an OSHA incidence rate of 3.2 in 1993. This rate is 22 percent better than the goal of 4.1. •

*Tom Harris, Richard Scott and Keith Boman were the proud winners in the 1993 PRIDE grand prize drawing.*



Kent Schmoeker

## PRIDE 4th Quarter Winners

The Safety and Health Department would also like to announce the winning departments in the fourth quarter 1993 PRIDE contest.

### In the Production/Maintenance category:

- Plant 19 Process Engineering
- Kearny Mesa Mock-Up
- Plant 19 Tool Control
- Plant 19 Facilities Maintenance

### In the Engineering/Quality/Material category:

- Receiving Inspection
- Tooling Verification
- Transportation

### In the Star Achievers category, which includes departments that had no injuries during the previous year:

- Kearny Mesa Plant Operations
- Titan/Centaur Test Operations
- Atlas Test Plan & Data Requisitions
- Atlas Avionics Lab Support
- Titan/Centaur Avionics Lab Support
- Plant 19 Tool Manufacturing
- Plant 19 Manufacturing Engineering & Planning

## New Department Locations in Kearny Mesa

In the last issue of the Orbiteer, an article mentioned that there were several facility moves in 1993. Below is a list of where groups involved in these moves are now located in the Kearny Mesa Facility.

### Building 24

- |         |  |
|---------|--|
| 1 North | Commercial Launch Services, Human Resources  |
| 1 South | Business Communications, ILS   |
| 2 North | Procurement, Material, Contracts & Estimating  |
| 2 South | Quality Assurance, DCMO  |
| 3 North | Space Magnetism, Manufacturing Resource Planning II  |
| 3 South | Scheduling, Internal Audit, Manufacturing Engineering, Facilities Management, Computer Sciences Center Support |
| 4 North | Finance, Information Resource Management, Manufacturing Resource Planning II                                   |
| 4 South | Executive Complex, Legal/Ethics  |

### Building 25

- |         |   |
|---------|---|
| 1 North | Advanced Systems (Karas), Research & Engineering (Di Nal) |
| 2 North | Titan/Centaur Mission Integration (Kruse)                 |
| 2 South | Atlas/Centaur Mission Integration (Roberts)               |

### Building 26

- |         |  |
|---------|--|
| 1 North | Martin Marietta Field Office, Titan/Centaur Engineering (Nirschl), Titan/Centaur MIC Room, Atlas RTDS Room |
|---------|--|

*Continued on page 6*

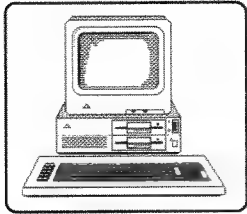


## Industry Information

Continued from page 1

Arianespace's Ariane 44LP launch failure on January 24 apparently was caused by a malfunction in the rocket's cryogenic third stage, according to the French-led consortium that reports a bearing in the liquid oxygen turbopump may have overheated and failed, shutting off the flow of oxygen to the third-stage engine. Two satellites were lost. •

# Increasing our Division's Computer Security Awareness



By Nancy Sexton, Industrial Security

In the highly competitive launch business, it is vitally important that we

protect our technical and private/proprietary data. Making a reasoned decision on whether or not to allow others to access any files and using personal diskettes on shared systems to control file access are ways to protect your computer information. One of the best and easiest ways to do this, however, is to install password protection on your computer system.

For a password to have any value it must be one that cannot be easily guessed by another person. Protection of our technical edge and competitive ability may depend on it.

The following guidelines are provided as basic computer security information for employees:

- **Choose a difficult password** – experienced hackers use password generators. Do not use passwords another user can easily guess, such as your own name.

### Examples of BAD passwords:

|          |         |         |
|----------|---------|---------|
| BOB      | BOBSMAC | BOBGDSS |
| SEPTBOB  | BUSCOM  | GDSS    |
| JUNE8    | BOB1    | FINPLAN |
| ATLASCON | CENTAUR |         |

If you are using your name or some other easily guessed password, it should be changed immediately. Supervisors should set the example and enforce this important policy. Use passwords with *at least* six characters

and change them often, at least every 90 days.

Your password should not be a word from an English language dictionary. Instead, use acronyms, combine alphabetic and numeric characters, and mix upper and lower cases to make guessing the password (or hacking into it) more difficult.

### Examples of BETTER passwords:

lwri2mm  
(I will retire in two more months)

Pkbasa42  
(Polish kielbasa for two)

MdSjha7b  
(My daughter Sue just had a (7) baby)

I8Hppekib  
(I ate Hopi peki bread)

- **If your hard disk drive contains sensitive GDSS data consider installing password protection on your Macintosh.** If your personal computer has a password capability, use it. Weigh the risks versus the need for others to share your computer.
- Do not place GDSS private information or proprietary data on public folders. Much of GDSS proprietary data is also competition sensitive. Use your best judgment in deciding whether to grant access to other users. Prevent browsing from unauthorized users within and outside GDSS. Once we lose our technological edge, it's difficult to get it back.
- **Back up your hard disk regularly and protect the backup as you would the original files.** •

## Classifieds

Classified Ads are free to GDSS employees and retirees. All ads should be typed or written legibly, be kept brief, and will be printed as space permits. Items for sale or rent cannot be listed in more than two consecutive issues, and only one ad per person per issue. A new ad must be submitted for each issue as we cannot hold ads for future publication.

All ads must include your name, mail zone, work extension, and home phone number. Only home phone numbers will be printed in the ad. Exceptions: Ridesharing and lost/found item information (we will print work extensions with these ads).

**Send ads to: Orbiteer Editor,  
Mail Zone K4-5502**

Classified ad information appearing in the *Orbiteer* comes from many sources. The *Orbiteer* and the General Dynamics Corporation do not assume responsibility for or warrant the accuracy or completeness of statements appearing in these advertisements.

**NEXT DEADLINE: COB  
WEDNESDAY, FEBRUARY 9**

**FOR SALE,** 1982 Chevy Malibu station wagon, good condition, \$1,650. Sharon 271-1426

## Space Briefs

**From Community Relations – The San Diego Museum of Man will be holding GD Corporate Family Day on February 5.** GD employees can get in free to the museum that day by showing a recent GD paycheck stub. The museum, located in Balboa Park, opens at 10 a.m.

**From Convair Alumni Association – The CAA's February luncheon meeting will be held at 12:45 p.m. on February 15 in the Kearny Mesa Cafeteria.** The featured speaker, Rick Metcalf, will address the Clinton administration tax changes and how they will affect senior citizens.

**From Maternity Fraternity – The next seminar will be from 11 a.m. to noon, February 17 in the CIS Staff Conference Room, in the lobby of Kearny Mesa Building 24.** All are welcome to attend and learn about "Stress and Pregnancy." Please contact Elaine Briggs at 39548 or Becky McDonald at 44135 for additional information.

## Employee Profile – The Maintenance Dispatch Center



Dispatchers Barbara Pelekai, Tanya Nicolet & Rosella Miller

By Tom Edwards, Facility Services

Calls for maintenance service come in all the time to the Maintenance Dispatch Center. There are things you should know, however, before calling the center's staff at 39777.

- When placing a request-for-service call, please have the equipment asset number available for the dispatchers.
- Not all items needing maintenance, such as restrooms, have asset numbers. Be prepared to give the location of these items by building, floor and column number.

The dispatchers use the Property Accountability Records System (PARS) to keep information on the over 1,000 calls they receive and answer each month. They also perform other duties such as interfacing with service contractors. These tasks keep our dispatchers very busy, but they stay committed to quality customer service. •

## Facilities Moves

Continued from page 4

- 1 South Titan/Centaur Program Office, Titan Centaur Engineering (Nirschl), NASA, Mail Room, Copier Services
- 2 North Titan/Centaur Finance, Contracts & Estimating, Engineering
- 2 South SLC-3E, Master Document Control (as of mid-February)

### Plant 5 - Low Bay Area

- 1 West Atlas/Centaur Program Office & Administrative Support
- 1 Center Atlas/Centaur Engineering (Kewley)
- 1 East Titan/Centaur Engineering (Bodle)
- 2 West Atlas/Centaur Engineering
- 2 Center Material Planning, Planning
- 3 East ILS, Engineering Storage, File Area



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**Orbiteer**

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VAEB Reporter: Barbara Kluehnst  
(805) 734-8232 Ext. 67547

## In The Next Issue...

- If all goes as planned, coverage of the first Titan IV/Centaur launch, scheduled for February 5
- Part 2 on Mike Gruszczynski's trip to Russia – Life in Russia

## Employment Figures

(Week Ending January 21, 1994)

|                                  |              |
|----------------------------------|--------------|
| Cape Canaveral AFS .....         | 525          |
| Commercial Launch Services ..... | 31           |
| Financial Services Center .....  | 73           |
| GD Space Services .....          | 37           |
| Hammond .....                    | 49           |
| Harlingen .....                  | 226          |
| Huntsville .....                 | 25           |
| Property Management .....        | 8            |
| San Diego .....                  | 2,325        |
| Vandenberg AFB .....             | 184          |
| <b>TOTAL .....</b>               | <b>3,483</b> |

# ORBITER

GENERAL DYNAMICS SPACE SYSTEMS DIVISION

*A Biweekly Newsletter for the Employees of General Dynamics Space Systems Division*

**February 18, 1994**

## Centaur Gives Milstar Ride to Orbit



Mike Brown

**C**entral Florida shook at 4:47 p.m. EST on Monday, February 7, as the first Titan IV/Centaur rose from Launch Complex 40 at Cape Canaveral Air Force Station. At the end of the 6-1/2 hour mission, Centaur separated from the Milstar payload and placed it in a 22,000-mile geosynchronous orbit.

As Martin Marietta's subcontractor, we should all be proud of the successful and long-awaited launch of Titan/Centaur 12. This launch is the first time the Centaur built for Titan IV has flown. We are contracted with Martin to develop, produce and launch 14 more of these vehicles.

The 20-story Titan IV Centaur is designed to deliver a 10,000 pound spacecraft into geosynchronous orbit. As witnessed last Monday, this performance is unmatched by any of America's launch vehicle fleet. •



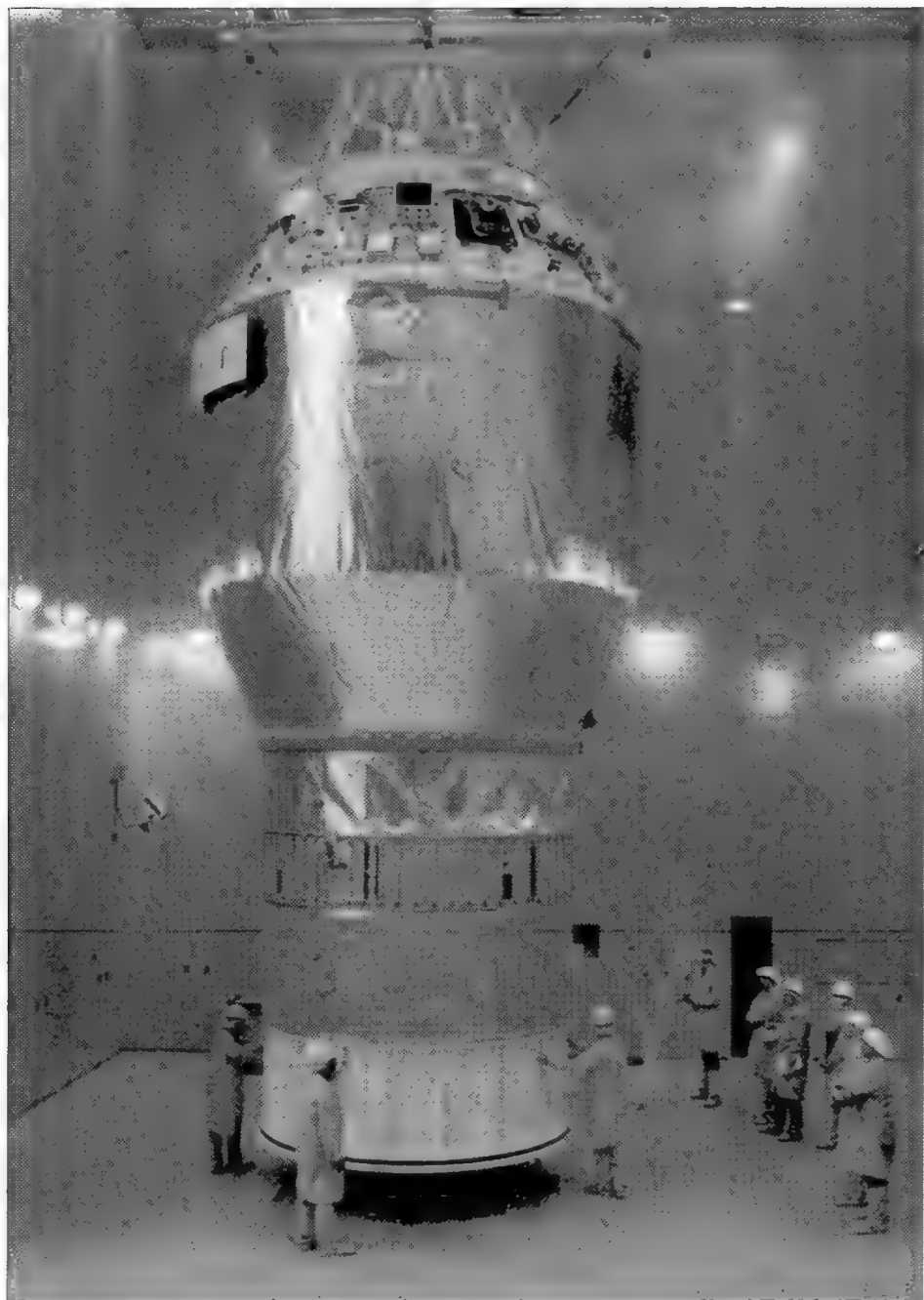
### ***In This Issue***

**Space Systems Wins IELV Competition... see page 3**

**See page 2 for more information on the Titan IV/Centaur**



# About our Titan IV/Centaur



The widebody Centaur for Titan IV is 14 feet in diameter, versus the 10-foot Atlas/Centaur. This gives it a 50 percent higher propellant capacity for its typically longer mission and heavier lift.

Centaur has the capability of multiple engine restarts during flight. For the Milstar mission, Centaur performed three engine starts, or "burns." The first burn happened early in the flight with a long coast phase of over five hours following the second burn. The third and final burn occurred shortly before spacecraft separation.

Centaur was originally developed in the early 1960s as an advanced high-energy upper stage to carry NASA spacecraft on lunar and planetary missions. Because it was the first vehicle to use liquid hydrogen fuel, Centaur spearheaded development of entirely new propulsion and propellant control technologies.

Centaur's first successful flight was on November 27, 1963. By August 1965, Centaur proved its operational capability by launching the dynamic model of the Surveyor spacecraft.

General Dynamics has incorporated extensive modifications and improvements to Centaur over the years, including improvements to the Pratt & Whitney RL10 engines. Altogether, the 10-foot-diameter Centaur has flown 88 times, including six operational planetary missions with Titan III. The next launch of Titan IV/Centaur is set for the second quarter of 1994. •

## The Milstar Satellite

The Milstar satellite launched on TC-12 is the first in a series of satellites to be launched for a worldwide command, control and communication system serving all of the military services. The primary Milstar constellation will consist of four Milstar satellites placed around the globe in geosynchronous orbits to cover the mid-latitudes, according to the Air Force. The second Milstar I satellite is projected to launch in 1995. •

### Physical characteristics of the Milstar satellite:

|                    |                        |
|--------------------|------------------------|
| Weight             | 10,000 pounds          |
| Wing Span          | 52 feet                |
| Wing Cross-Section | 42 inches X 44 inches  |
| Solar Array Size   | 10 feet X 49 feet each |

## More Good News for GDSS

# NASA Awards Division IELV Contract

NASA Lewis Research Center recently announced the selection of GDCLS for negotiations leading to two firm Atlas launches and seven options for the Intermediate Expendable Launch Vehicle (IELV) program. Under this long-term program, Atlas vehicles will be used to launch NASA's scientific and communications satellites.

The first mission, scheduled for 1998, will be an Atlas IAS launch of the first Earth Observation System (EOS) spacecraft from GD's West Coast

launch facility at Vandenberg AFB. GDSS is currently under contract with the U.S. Air Force as the integrating contractor to modify Space Launch Complex 3-East to accommodate Atlas II, IIA and IAS launches. This capability, previously not available at Vandenberg, will permit placement of intermediate-class payloads into polar orbits.

The Atlas IAS will be modified for the EOS mission to accommodate heavy, low-earth orbit (LEO) payloads.

In addition, the 14-foot-diameter payload fairing will be stretched three feet to accommodate this larger class of satellites.

The second firm mission will only be assigned and procured if necessary to support future NASA mission requirements. A potential candidate is the GOES L spacecraft from Complex 36 at Cape Canaveral AFB. •

## A Russian Experience – Part II

# Life in Russia

If you were to visit Russia, you probably would stay in one of the four-star hotels in Moscow. But Senior Engineering Specialist Mike Gruszczyński didn't have that luxury when he went to a small Russian town to oversee testing on an Atlas IAS model last year. (See article in February 4 issue of the *Orbiteer*.)

In Zhukovsky, the town where the testing took place, Mike first was placed in a KGB sanitarium because the town was closed to all but Russian nationals with clearances up to two years ago and appropriate hotels were never built.

"I spent seven weeks in the sanitarium, meeting people from all over Russia," Mike said. "The KGB agents are sent there for two weeks of rest and relaxation and then go back to duty."

After the seven weeks, he was moved to the Russian flight pilots' hospital for the remaining three weeks of his trip. The major Russian test flight institute is also in Zhukovsky.

Most Russians live in tall apartment buildings. Few own their own houses, and housing is limited, except for those lucky enough to have a dacha, a summer house built before the Communist revolution. Mike said this surprised him the most.

While living there, Mike had a pretty basic routine. He would begin

with the thirty-minute walk to work each morning after eating a breakfast of mostly meat, potatoes and bread. Cars are a luxury in Russia, so almost everyone walks or takes public transportation, which rivals that in any city.

At lunch, he would return to where he was living for his meal, which consisted of mostly meat, potatoes, bread and dessert. Then, at the end of the day, he'd go home for his dinner meal of meat, potatoes and bread.

Even with this basic diet, Mike said he didn't suffer from food shortages. "There was plenty to eat in both the hospital and sanitarium."

If Mike was in the mood for fresh fruit, he headed to the outdoor marketplace in the square, which is open no matter what the weather, even in the snow at ten below zero.

"Many Russians buy their food at the market, which has prices comparable to ours in the States," Mike commented. "However, if you wanted low-cost, subsidized Russian products you shopped at the state market. The only problem is the lines. You have to stand in one line to find out what they

have, then you stand in the cashier line to pay for the product, then you wait in another line to pick up the item. You do that for every product – meat, fish, baked goods, etc. It can take a long time."

But the Russians are used to this, and Mike says that one adapts quickly.

Life in Russia has never been easy, he added.

"People spend a lot of time either working or getting things done," Mike said. "But Russians do see a brighter future, and after witnessing the enduring spirit of the Russian people I think they will succeed. A very positive aspect of Russian life is the emphasis on their children's education. They believe this is the most important gift they can provide." •



*Russians in the town of Zhukovsky often purchase food in this outdoor market, which is open no matter what the weather.*

Mike Gruszczyński

# Retirees

## Raymond Anderson

Calibration Technician, Sr. .... 11 years

## Hubert Arrendale

Engineering Specialist ..... 18 years

## Kathryn R. Bailey

Financial Analyst, Sr. .... 22 years

## Charles E. Bassett

Engineering Specialist, Sr. .... 14 years

## Ivadell Baughman

Quality Assurance Specialist ..... 41 years

## Donald K. Bjelke

Division Vice President & Assistant

General Counsel ..... 32 years

## Patricia A. Bullock

Financial Specialist ..... 35 years

## William Bussey, Jr.

Engineering Specialist, Sr. .... 20 years

## James A. Cleghorn

Chief - Procurement ..... 42 years

## Troy A. Cooper

Production Specialist, Sr. .... 21 years

## Charles A. Davis

Engineering Specialist ..... 19 years

## Robert F. Frederick

Chief Quality Engineer ..... 34 years

## Vincent Gabany

Engineering Specialist ..... 6 years

## Garrison Gigg

Hammond Office ..... 10 years

## James T. Graham

Program Manager ..... 35 years

## Mary L. Grant

Management Statistician, Sr. .... 37 years

## Marshall E. Ilstrup

Engineering Specialist ..... 8 years

## Keiichi Kakuda

Engineering Specialist ..... 9 years

## Shirley A. La Page

Dept. Clerk - Engineering ..... 6 years

## Harold D. Leroy

Maintenance & Tooling

Welder ..... 5 years

## James A. Lessing

Program Manager ..... 38 years

## Tomiko Miyamoto

Accountant ..... 34 years

## Morton M. Moon, Jr.

Quality Assurance Engineer ..... 2 years

## Ramon Muller, Jr.

Jig & Fixture Builder ..... 27 years

## John W. Newsome

Safety Engineer, Sr. .... 5 years

## John W. Parry

Program Financial

Administrator ..... 33 years

## James M. Rager

Program Manager ..... 35 years

## Galdino Salvador

Hammond Office ..... 41 years

## Charles Wardinski

Manager - Production ..... 43 years

## David L. Watson

Fire Captain ..... 39 years

## James L. Winger

Quality Assurance

Engineering Specialist, Sr. .... 40 years

# Defense Department Rescinds Designated Country List

By Nancy Sexton, Industrial Security

Responding to the current political changes taking place around the world, the Assistant Secretary of Defense recently rescinded the Designated Country list. The Designated Country list consisted of those countries determined by the Department of Defense to have policies hostile to those of the U.S. government. The list included all former Soviet bloc countries as well as Iraq, Iran, Libya, North Korea and 17 other countries. For many years cleared employees were required to report on all travel to these countries and any contact with their citizens or representatives.

The elimination of this list does not mean that cleared employees no longer have to make specific reports to Security. However, unless a cleared employee has reason to believe there has been an attempt to gain unauthorized access to information or has other contacts of a suspicious nature, reports of foreign travel and contacts with citizens and representatives of Designated Countries need not be made to the DoD.

Cleared employees will still need to make reports of foreign travel to Security. However, if an employee attends a meeting at which citizens or representatives of Designated Countries also attend, there is no need to report the meeting of these people to Security unless a suspicious contact is made. The contact need not be a blatant

attempt to gain access to sensitive data to be suspicious.

The new world marketplace of the 1990s has brought enormous change in the nature of our political and economic relationships with other nations. Sometimes those countries most aggressive in their hostile pursuit of our technical and economic data are our political allies. Employees must become as aware of the threat from "friendly" nations as from our traditional adversaries.

We are witnessing a period of intense economic and industrial espionage aimed at American businesses. As long as it's cheaper to steal and recruit than to research and develop, this trend will likely continue. The Security department is actually giving *more* Defensive Security Briefings lately to inform all employees of the threat from "friendly" nations.

## International Travel Advisories

The Security staff has current information available regarding travel to all foreign countries. They subscribe to an excellent monthly publication highlighting "risk ratings" for these countries. The publication also lists which airlines to avoid when traveling through high-risk areas.

The Security department offers the use of this service to all employees in the planning of business or personal travel. •



# Service Anniversaries

## January 1994

### 35 Years

Carlos Banks  
Gerald Bentley  
Thomas Dobyns

### 30 Years

Robert White

### 20 Years

Robert Renteria  
David Roldness

### 15 Years

David Berry  
Hector Culver  
Larry Davis  
Robert Gilreath  
Joey Gordon  
Richard Hora  
Laura Lash  
Joseph Makowski  
Rosella Miller  
Mark Nash  
Robert Nouchi  
Ann Stonecipher  
Mark Ware

### 10 Years

Brenda Daly  
Duane Dixon  
Mark Dornseif  
James Engel  
Thomas Erickson  
Jaime Farber  
Sharon Hassell  
Paul Hawkins  
George Heffner  
Jerry Jamison  
Bryon Kerby  
Damiana Lawrence  
Marcella Martin  
Mark McCray  
Stephen Norris  
Charles Paige  
Sheila Prince  
David Richter  
Thomas Robbins  
Edwin Roferos  
Craig Sherman  
Michael Terrien  
Gilbert Weitala

### 5 Years

Raymond Barnes  
Teresa Barnett

### 5 Years Continued

Jack Bono  
Eugene Bowen  
John Bryan  
Christopher Buck  
Miriam Burch  
Renato Cabral  
Shirley Clark  
John Coen  
James Cox  
Armando Cruz  
William Davis  
Michael Dismuke  
Joseph Duffie  
Linda Earing  
Eblan Farris  
David Fillmore  
Mary Elizabeth Frey Delaney  
Robert Gabrielli  
Carol Galzerano  
Michael Gibbens  
Richard Golden  
James Grayson  
Jeffrey Gurtizen  
I. Hall  
Thomas Hussmann  
Lawrence Jensen  
Jeffrey Johnson  
Kevin Kirby  
Manuel Lerma  
Francisco Lim  
Michael Lindstrom  
Arturo Mar  
Duane McCarty  
Jennifer McCoy  
Gary McCulley  
Larry McGalliard  
Nathan Melton  
Kurt Moran  
Mildred Munoz  
Timothy Mustalo  
Leonardo Oliva  
Rodney Penney  
Paul Ramirez  
Alfreda Ridgway  
Kent Robbins  
Melissa Rodriguez  
Michael Santi  
Timothy Savage  
Gary Shield  
David Smith, Jr.  
Gary Snyder

### 5 Years Continued

Donald Spencer  
Jack Spero, Jr.  
Jay Stevens  
Rodney Stonebraker  
Warren Stubblefield  
Kurt Wehmuller  
Katharyne Wilkie  
Michael Williamson

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**NEXT DEADLINE: COB  
WEDNESDAY, FEBRUARY 23**

**BOAT FOR SALE,** 1991 19' Larson All-American w 150 Evinrude, excellent cond. & very low hrs, great for skiing & fishing, refinanced current loan. Bill 679-0650

**WANTED,** cabover camper 10' or 12', completely self contained, manufactured between 1990-94. R.J. 461-9066

**FOR SALE,** 1988 Honda Elite motorscooter, SPD-80, 7,400 mi., purchased new in 1991, \$700. Rich 447-7185

**WANTED,** Used Norditrac exercise machine to buy. Sally 538-4187

**BOAT,** 20' 1991 Bayliner Capri Cuddy 125 HP inboard, always garaged, 90% freshwater use, less than 50 hrs on engine, outstanding cond., \$10,000. John 739-7220

**FOR SALE,** Schwinn bike, \$50; Panasonic answering machine, \$30; 1990 white Honda Accord DX, 4-dr w air & stereo, 55,000 mi., \$10,300. Roxanna 550-0742

## An Interview with the Division President on Atlas IIAS

The Orbiteer recently listened in to an interview between Division President Mike Wynne and Patrick Seitz, a reporter from Space News. Below are Mike Wynne's comments in response to Patrick's questions on Atlas IIAS.

### **Patrick Seitz: What does the Atlas IIAS launch mean for General Dynamics?**

**Mike Wynne:** For GD, it was the introduction of our most powerful rocket. We have completed four new rocket designs in four years. It also was a historic launch in that it is the first application of solids to Atlas. The systems engineering we brought to the new rocket design have been confirmed. Our customers are pleased and that should be reflected in new orders. The launches of AC-106 and AC-108 also demonstrated that we can launch within 15 to 17 days of the last launch. We are also now well positioned within the satellite weight niche.

### **Patrick Seitz: What is the window of opportunity for the IIAS?**

**Mike Wynne:** Since it's brand new

and weights are migrating to the 6,000- to 8,000-pound class, our window should last past the turn of the century. But we may have to improve the product.

### **Patrick Seitz: What upgrades do you plan?**

**Mike Wynne:** Our plans include the Single-Engine Centaur, but we're disappointed that NASA has not funded this program. There is a reliability factor and a cost reduction factor and it's disappointing that they (NASA) don't share our enthusiasm.

### **Patrick Seitz: When will Single-Engine Centaur be ready?**

**Mike Wynne:** If they fund, 1998.

### **Patrick Seitz: Will NASA come around?**

**Mike Wynne:** We sure hope they do. We believe they will come to realize two things:

- 1) The evolution of Expendable Launch Vehicle (ELV) fleet is necessary, and
- 2) We need to reach forward for new technology.

Between now and the year 2010, there

are \$20 billion worth of satellites to launch, so investing in the ELV fleet is imperative.

### **Patrick Seitz: What new business opportunities do you foresee?**

**Mike Wynne:** We have proposals outstanding to several customers who perhaps were waiting for AC-106 and AC-108 to launch successfully. I can't say who, but there's a good selection and I'm optimistic. IELV (Intermediate Expendable Launch Vehicle), for example, has up to 16 vehicles, and we just turned in a proposal. (*Editor's Note:* We've since won this award. See page 3 for details.)

### **Patrick Seitz: I've heard it said that the concern on a new vehicle should be with the second and third one, not the first which has gotten so much attention?**

**Mike Wynne:** That may be a tried and true myth, but we're striving to be the Best in Space and to give every customer the full attention. We won't have any falloff and are looking forward to more IIASs. •

## Upcoming Security Department Moves

The Security department wants to be sure that all employees are aware of the following group moves:

- **Master Document Control** moved to Kearny Mesa Building 26 on February 17. They are now located on the second floor at column 210T, and all personnel have the same phone extensions. This office will reopen on February 21.
- The **Space Systems Identification Office** will move to Kearny Mesa Building 24 on February 22. This office will be located near the lobby area, column 144N. You will still be able to reach this office at 38404. •



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### **In The Next Issue...**

- **Manufacturing Resource Planning II On-line at Kearny Mesa**
- **The Family & Medical Leave Act**

### **Employment Figures**

(Week Ending February 4, 1993)

|                                  |              |
|----------------------------------|--------------|
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| Harlingen .....                  | 225          |
| Huntsville .....                 | 25           |
| Property Management .....        | 8            |
| San Diego .....                  | 2,299        |
| Vandenberg AFB .....             | 183          |
| <b>TOTAL .....</b>               | <b>3,445</b> |

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GENERAL DYNAMICS SPACE SYSTEMS DIVISION

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(504) 543-3227

Harlingen Reporter: Noelia Gutierrez  
(210) 430-7835

Huntsville Reporter: Don Deming  
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Space Services Reporter: Dave Bennett  
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# ORDITER

GENERAL DYNAMICS SPACE SYSTEMS DIVISION

A Biweekly Newsletter for the Employees of General Dynamics Space Systems Division

March 4, 1994

## MRP II Comes to Kearny Mesa

**K**earny Mesa received an extra-large valentine on February 14 this year – the launch of Manufacturing Resource Planning II.

The conversion process for this site has been an ongoing activity for the last year, but the official activation of this process represents a significant milestone, as another manufacturing facility is now on-line.

John Grando, Plant 5 site director, is pleased with the new system. "MRP II represents the opportunity to coordinate thousands of requirements into a master plan that satisfies our internal and external customers – a positive commitment to our future as a



Computer Sciences Corporation supports our implementation of MRP II. Shown here are (from left to right): Rich Ingardia, CSC program manager – MRP II Implementation; Jeff McCreary, CSC manager – MRP II Manufacturing; Michael Gass, GDSS Plant 19 site director; Mike Iverson, GDSS IRM/MRP II director; Sue Gillingham, GDSS account executive at CSC; and John Grando, GDSS Plant 5 site director.

*Continued on page 2*

## Enhancing the Reliability of Atlas

**A**t the end of February, the U.S. Air Force culminated months of study by adding a multi-year project, the Atlas Reliability Enhancement Program (AREP), to its existing Medium Launch Vehicle contract.

The objective of this effort is to increase the probability of satellite mission success by developing and qualifying launch system modifications that will improve our ability to launch on time and take advantage of performance and reliability inherent to the Atlas/Centaur design.

AREP began with a joint Air Force/industry evaluation of more than 50 initiatives that were suggested by the USAF, General Dynamics and our major subcontractors. After months of study, the Air Force selected 12 of these initiatives for further development. Included in the final cut are projects such as improved flight instrumentation, launch site hazardous gas detection systems and provisions for an automatic ground health monitoring system that will be managed and developed by GDSS.

Other initiatives, such as the

development of an "electronic" engine for the Centaur, will be executed by our subcontractors. In all cases, GDSS will provide the systems engineering necessary to integrate these efforts into a highly reliable, cost-effective package under the leadership of Andy Keller, the AREP project director.

"The Air Force is really behind this program," Andy said recently. "They recognize that by increasing the reliability of our launch vehicles, we are also increasing the probability of

*Continued on page 3*



## MRP II

Continued from page 1



Tom Sawyers,  
Material  
Planner

**"MRP II is state of the art. It makes inventory control and scheduling easier and more cost-effective. This system is more efficient for all concerned."**

provider of launch services."

There are several advantages to building GDSS's launch vehicles under MRP II, according to Mike Iverson, IRM/MRP II director. These include:

- Integrating vehicle schedule with a detailed parts schedule
- Breaking down work requirements into smaller tasks
- Replanning detailed part requirements on-line in the MRP II system to meet master schedule commitments
- Enhancing forward visibility for parts requirements

Tim O'Leary, manager – Material Planning, agrees. "MRP II gives us the opportunity to see potential problems before they arrive and to avoid them. It's a very forward-looking system, not just the software, but the whole culture involved. To be successful, we must manage ourselves from product support teams at the beginning of the build process through to factory performance." •

## Status of GDSS's Programs and New Business Activities

*This article, part one of two in a series, describes current activities in Space Magnetics and the Titan/Centaur program offices. In the next issue of the Orbiteer, the SLC-3E program area and the Atlas Program office will be featured.*

### Space Magnetics

#### ITER

Space Magnetics is currently under contract for superconducting magnet research and development in support of the International Thermonuclear Experimental Reactor (ITER) program. The ITER is a large multi-country (U.S., Japan, Russia, and European countries) funded program to develop a full-scale engineering fusion reactor that will be used to generate electric power. Space Magnetics' contract is through the Massachusetts Institute of Technology.

We will soon begin the task of designing a subscale prototype of the central solenoid magnet required for the ITER. This activity will be followed in late 1994 or early 1995 by the fabrication of this model magnet.

#### Current Limiter

Space Magnetics is also under contract to the U.S. Department of Energy for development of a Superconducting Current Limiter. GDSS, under a grant from the Department of Energy, is developing an advanced device that will ultimately be used by power utilities to help limit fault currents that occur within their systems.

The GDSS team is currently in the concept development phase of the program, with the next major program

milestone being the semi-annual program review scheduled for April of 1994.

#### Superconducting Magnets

Space Magnetics is also actively pursuing new business in several areas of superconducting magnet systems.

On February 4, 1994, we submitted a prime proposal to Lawrence Livermore National Laboratory for the design and fabrication of large superconducting magnets in support of the Tokamak Physics Experiment (TPX). TPX is a next-generation fusion experiment to be built by the U.S. Department of Energy at the Princeton Plasma Physics Laboratory.

If successful in its bid, GDSS would perform preliminary design of the magnets over a one-year Phase I effort. This would be followed by a Phase II award for final design and fabrication of 30 magnets.

GDSS recently submitted its revised proposal to Textron Defense Systems in support of the Magnetohydrodynamic (MHD) Submarine Propulsion Program. This program, which is sponsored by the U.S. Navy Office of Naval Research, is directed at designing and building a prototype MHD powered vehicle.

GDSS' role is to provide the superconducting magnet required. Funding for this effort is expected to

be obtained within the next two months.

#### MAGLEV

On the transportation front, Space Magnetics continues to pursue several applications of magnetic levitation (MAGLEV). We are currently working with the cities of Pittsburgh and San Diego on projects that involve future MAGLEV transportation systems. It is likely that GDSS will receive initial funds to perform system studies later this year for both routes. •

### Titan/Centaur

#### Titan/Centaur 10

Following the success of TC-12 in a near-flawless flight last month, the Titan/Centaur team is preparing TC-10 for a second quarter launch at CCAFS Launch Complex 41.

#### Titan/Centaur 11

TC-11 has essentially completed systems testing in the Vertical Integration Building.

#### Current Production

Production for the 15-vehicle contract is well over 50 percent complete. Seven vehicles have completed final assembly, three are in the final assembly docks, and only five tanks remain to be fabricated at Plant 19. •

## Atlas Reliability

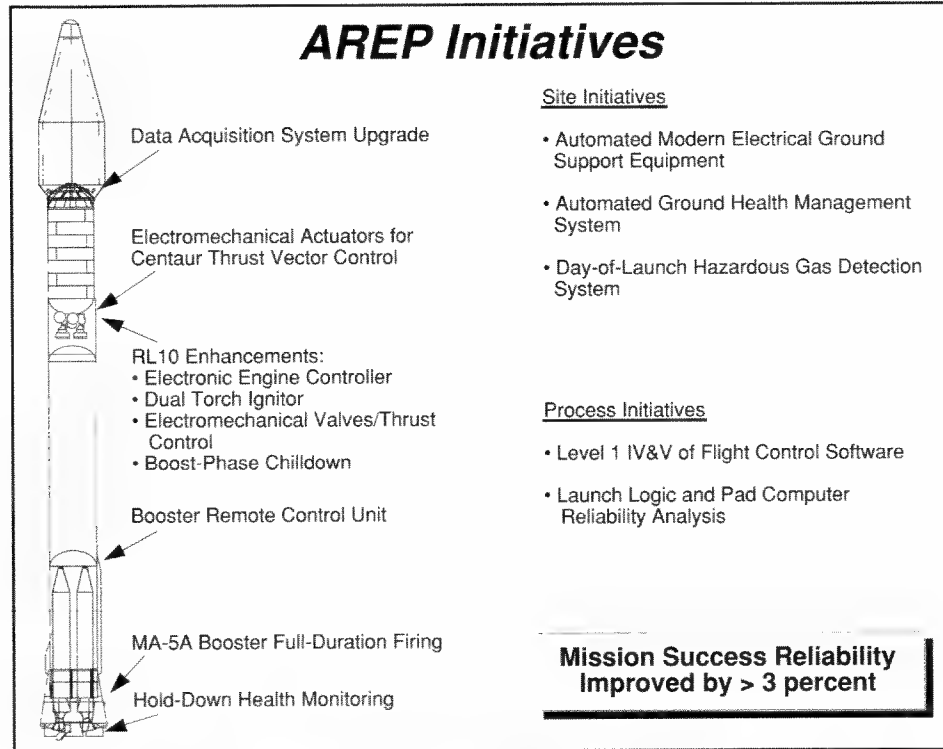
Continued from page 1

mission success for their unique payloads."

If all of the initiatives are implemented, the program should increase the launch vehicle's reliability by around three percent. The development of these initiatives needs to be completed by the end of 1997, according to the program's current schedule.

Authorization to implement the AREP demonstrates the Air Force's confidence in the Atlas/Centaur as a launch vehicle and as a critical component in their plans to provide the Department of Defense with access to space that is affordable, cost-effective and reliable. It is also an example of Space Systems' commitment to continuous improvement as we strive to preserve our role as the "Best in Space." •

### AREP Initiatives



*These initiatives make up the Atlas Reliability Enhancement Program, which will improve our mission success reliability by more than three percent.*

## Classifieds

Classified Ads are free to GDSS employees and retirees. All ads should be typed or written legibly, be kept brief, and will be printed as space permits.

All ads must include your name, mail zone, work extension, and home phone number. Only home phone numbers will be printed in the ad.

Send ads to: Orbiteer Editor, Mail Zone K4-5502

**NEXT DEADLINE: COB WEDNESDAY, MARCH 9**

**WANTED,** Cabover Camper 10' or larger, completely self-contained, manufactured between 1980-1994. R.J.L., 461-9066

**FOR SALE,** 1982 Chevy Malibu station wagon, V6, 4-door, good condition, \$1,650; Osterizer juicer, \$20. Sharon, 271-1426

**TRUCK FOR SALE,** 1986 Ford F150 long bed, 6-cylinder, 4-speed, topper shell, \$3,300 OBO. Penney, 689-0942

**FOR SALE,** 1985 Nissan 300ZX, excellent condition & low mileage, AC, t-top, black, leather interior, electric windows, seats, one owner, price negotiable. Barbara, 578-6373

# Family and Medical Leave Rules

Human Resources wants to be sure that all employees are aware that eligible employees can receive family and medical leave as applicable under the California Family Rights Act and the Federal Medical Leave Act.

Employees can request family and medical leave for up to 12 work weeks in a 12-month period for one of the following reasons:

- 1) For the birth or placement of a child for adoption or foster care (There may be additional leave eligibility for pregnancy disability. Individuals should check with Human Resources.)
- 2) To care for an immediate family member (spouse, child, parent; does not include parent-in-law or grandparent) with a serious health condition
- 3) To take medical leave when the employee is unable to work because of a serious health condition

In order to take this leave, employees are required to provide to the HR department the following:

- 1) 30-day advance notice when the need for leave is foreseeable or as much notice as possible
- 2) medical certification, both prior to leave and prior to reinstatement
- 3) periodic re-certification
- 4) periodic reports during leave

Granting a family and medical leave will not result in a break in service or in benefit coverage. There are exceptions to eligibility for this kind of a leave and under these circumstances, a request may be denied.

Contact your Human Resources representative for additional information. Also refer to the United States Department of Labor posting "Your Rights Under the Family and Medical Leave Act of 1993," WH Publication 1420, June 1993, and the Human Resources Bulletin 93-05, dated April 16, 1993. •

## Employee Profile – Les Browne, Walt Disney Winner

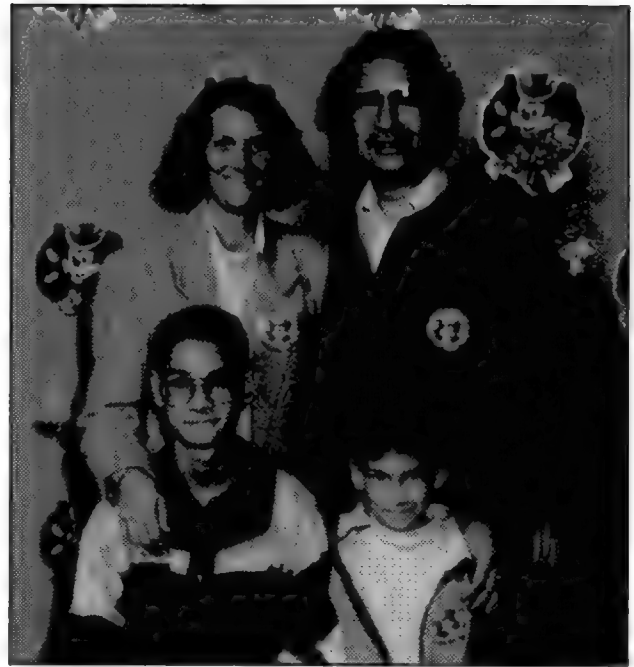
by Michelle McIntire, CCAFS Orbiteer Reporter

In December, Les Browne, a senior Human Resources representative for GDSS at Cape Canaveral AFS, FL, received a call from a reporter at a news station in Cocoa Beach. This reporter congratulated Les and indicated the Brownes had been selected from a contest entry, sponsored by Walt Disney World and the news station, as one of the families to participate in the Anniversary Celebration of the Walt Disney World. Les was indeed surprised and told the reporter that they had somehow made a mistake – Les had never entered this contest.

When Les arrived home, he told his 14-year-old son, Travis, about the unusual phone call that he had received earlier in the day. His son, jumping up and down, said, "I submitted our family's name! We won!"

Les and his family, who joined other contest winners from around the United States, enjoyed winning a one-night stay at the Disney Resort Hotel with meals included, admission tickets to the Magic Kingdom, and a huge give-away basket filled with Walt Disney videos, games, candy, stuffed Disney characters and other paraphernalia. The Brownes and the other winners had the run of the park from 8 p.m. to 1 a.m., as the park closed to the public at 6 p.m. The trip and gifts were valued at \$800.

Congratulations, Les. We only wish we could be so lucky and so surprised!



Les Browne and his family won a trip to Walt Disney World. Here they pose for a picture during their trip: (standing) Doreen and Les, and (sitting) Travis and Billy.

## Space Briefs

**From Community Relations – Mark your calendar for the upcoming March of Dimes WalkAmerica on April 23.** To get you interested in this fun and rewarding event, Karin Dolan of the March of Dimes will be staffing a table in the Kearny Mesa Building 24 lobby on March 11 from 11 a.m. to 1 p.m. Stop by and sign up to participate in this year's walk. Monies collected from the walk help fund programs to prevent birth defects and infant mortality.

**Also from Community Relations – The U.S. - Mexico Border Progress Foundation presented GDSS with its 1994 Border Corporate Leadership Award in February.** "The General Dynamics Space Systems Division has truly made its mark in the border communities in which

it has operated," noted Elsa Saxon, executive director of Border Progress. "From the spearheading of a relief effort for Tijuana flood victims, to the donation of equipment to schools in Harlingen, TX, the Space Systems Division of General Dynamics has greatly contributed to the quality of life of border communities and I cannot think of a more worthy recipient of our first annual award."

## Employment Figures

(Week Ending February 18, 1994)

|                                  |              |
|----------------------------------|--------------|
| Cape Canaveral AFS .....         | 517          |
| Commercial Launch Services ..... | 31           |
| Financial Services Center .....  | 70           |
| GD Space Services .....          | 39           |
| Hammond .....                    | 42           |
| Harlingen .....                  | 225          |
| Huntsville .....                 | 23           |
| Property Management .....        | 8            |
| San Diego .....                  | 2,265        |
| Vandenberg AFB .....             | 184          |
| <b>TOTAL .....</b>               | <b>3,404</b> |

**A Message from the CRA**  
Please make a note that  
the CRA Easter Egg Hunt  
will not be held this year.



The Orbiteer is printed on recyclable paper. After reading, please discard in the colored paper recycle bins.

## ORBITER

The Orbiteer, Space Systems Division's employee newsletter, is published biweekly. Submitted articles will be printed as space permits, at the discretion of the editor. All submittals may be edited per space requirements. Send items of interest to:

### Orbiteer

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# ORBITER

GENERAL DYNAMICS SPACE SYSTEMS DIVISION

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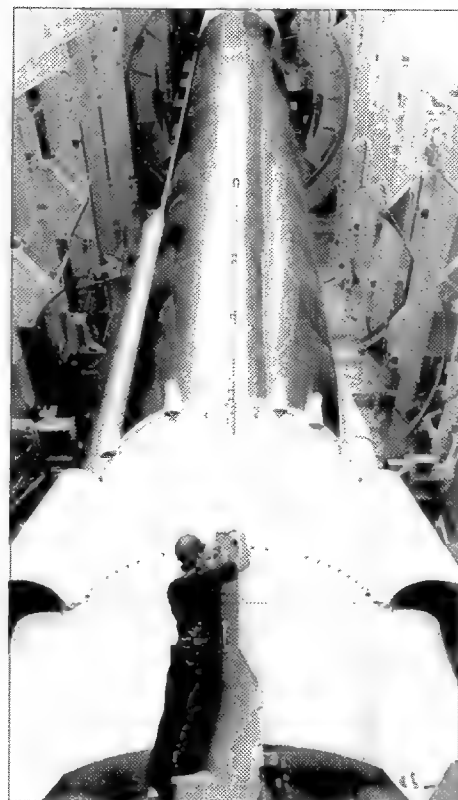
## GDSS Gets Two New Atlas IIA Launches

**M**arch has been a good month for business at General Dynamics Space Systems Division. A new multi-launch contract with Hughes Communications, Inc. calls for two initial launches of Hughes satellites aboard Atlas IIA vehicles. As those launches are completed, Hughes will be able to exercise options for future openings in the GDSS manifest without negotiating new contracts.

"This agreement is an indication of the professional respect Hughes Communications and General Dynamics hold for one another," Kevin McGrath, HCI president and CEO said. "Only with a high level of cooperation could we negotiate a contract that provides for both schedule and price flexibility." The contract extends through 1999.

The first spacecraft to launch under the new contract is the second satellite for the DIRECTV™ direct-to-home satellite service, scheduled for July. The second is HCI's follow-on Galaxy III-R spacecraft, scheduled for launch in late 1995 or early 1996. Both satellites are HS 601 spacecraft built by Hughes Space and Communications Co.

Michael Wash, GDCLS president, expressed our division's excitement about these new launch wins. "We are extremely pleased to offer this multiple launch package to Hughes Communications. This is a long-term commitment to one of our most significant customers and it demonstrates our ability to support our customers' needs." •



### Get Ready to WalkAmerica

GDSS is getting ready to support the March of Dimes WalkAmerica, being held April 23. Contact one of the following team leaders if you are interested in getting involved.

|                     |       |
|---------------------|-------|
| Nancy Anderson-Metz | 41371 |
| Debbie Faulk        | 43986 |
| Ann Goodwill        | 77766 |
| Joyce Gossett       | 38048 |
| Mary Ann Kasza      | 39459 |
| Marilyn Ramirez     | 44069 |
| Pearl Simmons       | 44203 |

For additional information on this event, contact Yolanda Mendoza 43602.

## Program Status for West Coast Atlas & Atlas Programs

*This article, part two of two in a series, describes current activities in our SLC-3E program area and the Atlas Program Office.*

### SLC-3E Ground Support System Program

#### Design Activities

Development and activation of SLC-3E for Atlas II, IIA and IIAS is approximately 30 percent complete. Design activities for both aerospace ground equipment (AGE) and facilities are nearing completion. The Critical Design Review for existing and

replicated AGE (CDR 1) was held in February 1994. CDR 2 for new and modified AGE will be conducted in early May; and the 90-percent Facility Design Review is scheduled for mid-June.

*Continued on page 2*



# Program Status

Continued from Page 1

## Site Dismantling

Our facility subcontract with Bachel is design/build, so that site preparation work is being accomplished along with design. Dismantling of the old site has been completed. The mobile service tower (MST) was toppled and removed in November 1993. Most existing equipment was removed from the launch and service building (LSB), and some LSB walls and floors were removed to prepare new foundations for the MST and the umbilical tower. Site rough grading was completed in early January, including fill for the new MST park position south of the LSB, the MST park position access road and pads for ancillary facilities and storage tanks.

In February, we began emplacement of the pilings to support the MST in both its service and park positions, along with the interconnecting rail bed. Foundations will be poured in May after piling completion, followed by start of MST steel erection in August 1994.

## The Missions

In addition to the U.S. Air Force missions for which SLC-31 is being modified, an IRLV EDS AM-L mission for NASA (an Atlas IIAS) will be launched from SLC-31 in mid-1995.

## Atlas Programs

The Atlas "one" program is the commercial sales, build and launch effort sometimes known as the "02-vehicle" program. In 1993, the core program included the outstanding launches of AC-106 and AC-108.

### AC-73

ATCCATS, the next launch vehicle, AC-73, is being prepared for launch on Complex 36, Pad B. The vehicle successfully completed an important prelaunch countdown on March 7. AC-73 will launch the GOES spacecraft in early April. The specific launch date will be published on posters announcing upcoming events, and updates will be recorded on the Atlas launch hotline (573-8709) as we get closer to launch.

The primary mission of the Geostationary Operational Environmental Satellite (GOES) is to provide worldwide meteorological data for improved forecasting and prediction. The GOES-1 satellite provides pictures of approximately one quarter of the Earth at 30-minute intervals, day and night. These pictures and data aid scientists in weather detection and prediction, observation of ocean currents,

monitoring of river water levels and other meteorological evaluations. In addition to its weather monitoring capabilities, GOES will supplement the cooperative international Search and Rescue program.

## Future Launches

Our following launch, AC-76, will be in June and will carry another U.S. Navy, Hughes-built Ultra-High Frequency (UHF) communications spacecraft to geosynchronous orbit.

After that, another Hughes spacecraft, the DIRECTV™, will be launched from Complex 36, Pad A. This will be a significant event because it is a "double" first-time event. It will be the first launch from Pad A of a 14-foot-diameter payload firing configuration and of a non-military mission.

These launches will continue our demonstration of outstanding reliability for our present and future customers and will support plans to launch as many as seven Atlases in 1994 and 11 in 1995. The lower 1994 launch rate (versus 1995) was tailored to spacecraft availability and allowed for some major upgrades to Pad A.



GDSS's TWIN nominees were recognized during Division President Mike Wynne's staff meeting. From left are Mike Wynne, Ed Squires, division vice president—Operations; Becky Vincent; Bob DiNail, division vice president—Research & Engineering; Nancy Lazar; Kris Buitenhek; and Rich Corbin, division vice president—Finance & Administration.

## TWIN Nominees Announced

GDSS has selected our nominees for this year's Tribute to Women in Industry (TWIN). Four women were nominated from the division, with one being selected for recognition at a city-wide event in May. Congratulations to these outstanding professionals.

### Nominees:

- Donna Sandsmark, director—Material
- Nancy Lazar, manager—Finance
- Becky Vincent, chief—Engineering

### Honoree:

- Kris Buitenhek, IRM staff specialist

# A Review of Our Goals and Objectives

*Rather than holding a State of the Division Address this year, Division President Mike Wynne held division "Management Meetings" on March 7 and 8. These meetings, which included GDSS supervision and some others, focused on our performance in 1993 and an overview of 1994, including a status of the Martin Marietta transition. The following is a summary of Mike Wynne's comments during these meetings.*

I feel there is a real need to communicate during this time. We've had many changes in 1993, but all the way you showed an open-minded approach and have coped well with them. You have all done an extraordinarily great job in getting us to where we are today. Your efforts in 1993 have set us up for a successful 1994.

However, this past year included many challenges that were difficult to overcome. First off, we suffered an anomaly with AC-74/UHF 1 and received no new launch awards during our four months of down time. We then lost the MLV III competition to McDonnell Douglas, the incumbent. In October, the U.S. Congress terminated the Superconducting Super Collider program and funding was canceled. Cost containment required action, including a restructured organization, layoffs and compensation changes.

But, with the support of the division's employees, we recovered with a sprint to the finish. We ended the year on a high note.

## 1993 Accomplishments and Highlights

- ❖ We consecutively launched four successful Atlas Centaur missions and one Atlas E mission.
- ❖ An all-out effort led to the successful launch of our first Atlas IIAS in December.
- ❖ We secured seven firm Atlas orders, including JCSat, a Hughes block-buy (DIRECTV™ and Galaxy), and EHF exercised options for #6, #8 and #9.
- ❖ Two Titan, Centaur vehicles, TC-15 and TC-17, were completed.
- ❖ We processed TC-12 and TC-10 for maiden flight.

- ❖ We achieved Launch Complex 40 initial launch capability, and our cooperation with Martin Marietta was never better.
- ❖ The SLC-3E site was dismantled and construction started.
- ❖ The first SSC dipole magnet prototype was completed on schedule.
- ❖ Improvements were made in quality assurance, including the reduction of QARs, defects and Foreign Object Elimination.
- ❖ We eliminated 188,000 square feet of leased space.
- ❖ Our Injury Incidence Rate improved. (see Figure 1)

## 1993 Goals Review

Through both the good and bad events, we were able to meet many of our personal and division goals for 1993.

- ❖ We had flight success in five out of six launches.
- ❖ Seven Atlas awards and other new business were captured.
- ❖ Our financial performance was close to plan, which is good considering AC-74 impacts and the termination of the SSC program.
- ❖ Manufacturing Resource Planning II was implemented.
- ❖ We took ownership of our processes, improved internal controls and took steps to identify and reduce program risks.

## Where Are We Now – The Transition

We are in a period of transition with our sale to Martin Marietta, which is near to closing. We need to remain positive and maintain our focus on the work ahead of us. Our attitudes as well as our talents will draw customers to us and the future of our business remains promising. We must always keep this in mind.

In preparation for the closing, the Federal Trade Commission has given preliminary approval on the antitrust concerns. There is one outstanding MMC issue, however – the Department

### 1993 – Safer than We Envisioned Improved Injury Incidence Rate

| Site                  | 1993 Goal  | 1993 Actual |
|-----------------------|------------|-------------|
| CCAFS                 | 5.3        | 1.8         |
| Hammond               | 7.7        | .5          |
| Harlingen             | 4.6        | 3.5         |
| Space Services        | 8.6        | 9.9         |
| VAFB                  | 4.5        | 4.4         |
| San Diego             | 3.3        | 3.5         |
| <b>Total Division</b> | <b>4.1</b> | <b>3.2</b>  |

**Figure 1.** Our division did a good job at beating our injury incidence rate in 1993. The Cape employees did an especially good job.

*Continued on page 4*

# A Review

Continued from Page 3

of Defense's response to Martin Marietta's cost savings plan, but we do not know where this stands at present.

Our transition planning is under way, with many alternatives on the table. These alternatives range from a consolidation in Denver or in San Diego to a mix of both. This mix of opportunities in both locations does exist, so the consolidation doesn't have to be of all operations in one place or the other. We must remember that this transition requires changes at both Martin Marietta and Space Systems sites. (See Figure 2 to see where our operations fit within the MMC organizational chart.)

We have several transition goals that we need to achieve:

- ❖ Maintaining Atlas and Titan/Centaur's quality and reliability to ensure continuous mission success
- ❖ Making the transition transparent to customers, minimizing the effect on our services to them
- ❖ Keeping the transition as smooth as possible for everyone involved

Our people and processes are key to fulfilling these goals. In fact, Martin Marietta can't do them without us. Our acquisition by Martin Marietta reflects that company's belief in the viability of the Atlas as a business and the importance of our upper stage capability. Martin Marietta is committed to the space launch industry.

Our goal to be the "Best in Space" is unchanged, even if the environment right now may seem strange. You can make the difference. Keep doing the best job you and your organization can do and try to maintain your sense of direction.

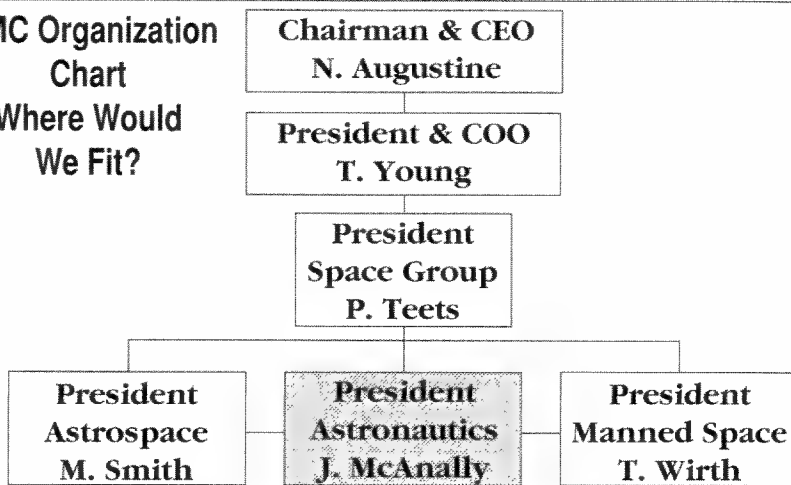
## Focus on Our 1994 Division Goals

We must continually keep our 1994 goals in mind if we are to remain a viable business. We need to:

- ❖ Achieve 100 percent flight success
- ❖ Secure five Atlas awards and other new business
- ❖ Reduce manufacturing and launch spans

### MMC Organization Chart

Where Would We Fit?



**Figure 2.** After the sale to Martin Marietta is completed, we will become a part of the Space Group's Astronautics segment.

- ❖ Achieve all financial goals, including positive earnings and positive cash
- ❖ Successfully complete the transition to Martin Marietta or restore our status as GDSS

More specifically, we must meet schedules, by minimizing engineering, procurement, manufacturing and launch spans, and through timely analysis and reporting. We need to maintain our quality with further QAR and FOE reduction. We must remember that internal and external customer satisfaction is very important. Managing our costs, including indirect budgets and discretionary spending, is also needed. By concentrating on these things, we can make our 1994 division goals a reality.

We have a challenging and dynamic year in front of us. The transition adds yet another dimension. But we need to focus on making 1994 our best year yet, and with your support and experience, our team can make this a reality. •

## Retirees

### Richard Andre

Engineering Chief ..... 38 years

### Robert Bradshaw

Engineering Staff Specialist ..... 32 years

### Donald Butler

Launch Service Mechanic, Sr. .... 27 years

### Robert Casper

Test Equipment Requirements  
Scheduler ..... 36 years

### Ronald Eckberg

Project Engineer Sr. .... 35 years

### Max Enoch

Tool Service Processor ..... 5 years

### Loris Green

Inspector ..... 37 years

### Russell Hall

Engineering Technician ..... 47 years

### John Hotz

Engineering Specialist, Sr. .... 42 years

### Joseph Lemmo

Manager - Contracts ..... 14 years

### Richard Martin

Senior Technical Staff Member ..... 43 years

### Howard McCray

Program Manager ..... 38 years

### John Moore

Launch Service Technician, Sr. .... 36 years

### Barbara Smith

Engineering Drawings  
Checker ..... 42 years

### Richard Smith

Engineering Manager ..... 36 years

### John Steinmetz

Launch Services Technician, Sr. .... 36 years

### Vito Tocco

Metal Fitter ..... 35 years

### Curtis York

Engineering Specialist -  
Productibility ..... 23 years

### Wilfred Young

Engineering Drawings  
Checker, Sr. .... 43 years



# Service Anniversaries

February 1994

## 35 Years

Raymond Cameron  
Roger Cook  
John S. Hinaldel

## 30 Years

Robert Draver  
Otis Hersley, Jr.  
Jack Youngs

## 20 Years

Kenneth Naita  
Billy Thomas

## 15 Years

Patricia Casiro-Deitch  
Annalisa Crocker  
Charles Dombrow, Jr.  
Norman Fowler  
Dennis Garegnani  
Pete Noyano  
Sandra Norrell  
Jack Roman  
Daniel Schwartzon  
Frank Wilson

## 10 Years

Howard Armstrong  
Winston Armstrong  
Robert Batinchek  
James Dejan  
Thomas Downs  
Veronica Edwards  
Wayne Hamilton  
Jerry Harms, Jr.  
William Hoover, Jr.  
David Jellay  
John Krueberger  
Wayne Lindsay  
Carl Luckner  
Gilbert Morrow  
Keith Mshola  
John Tarnage  
Dorinda Vagstad  
Kevin Woodworth

## 5 Years

Russell Bennett  
Dawn Bennett  
David Bennett  
Linda Bennett  
Christopher Bialous  
Sally Barber  
David Bradley  
Marlene Vandoren

## 5 Years Continued

David Caudle  
Santos Cervantes  
Jeffrey Chapman  
Joseph Clars  
Benjamin Conklin  
Richard Cunn  
Lee Culver  
Hai Dang  
Daniel Delgado  
Jose Desjardins  
Sanjeev Dhand  
Raul Garza, Jr.  
Michael Gegere  
Carlos Gomez  
Salomon Gomez  
Melanie Gonzales  
Adolfo Gonzalez, Jr.  
Peter Hackley  
Donna Hayes  
Norma Heller  
David Hernandez  
Kyle Klug  
Dieder Kuntz  
Amanda Linderos  
Larry Jarabee  
Michelle Lefevre  
Armando Maldonado  
Meg Masterson  
Bobby McCain, Jr.  
Miguel Mendez  
Eron Menelly  
Robert Morgan  
Geoffrey Murray  
Yvonne Perez  
Scott Price  
Dennis Puckett  
Charles Rotundo, Jr.  
Merry Russo  
Therese Salinas  
Paul Smith  
Patricia Sills  
Frank Starnes  
Chuck Tatra  
Mike Ann Teters  
Steve Tress  
Greg Wilbur  
Douglas Westman  
Shirley Zerkel

# Classifieds

Classified Ads are from GDS members and others. All ads should be typed or written legibly and be kept brief. Information cannot be used more than two consecutive issues, and only one ad per person per issue. A new ad must be submitted for each issue as we cannot hold ads for future publication.

All ads must include your name, mail zone, work address, and home phone number. Only home phone numbers will be published. If you are on a no-answering and/or no-mailing information basis, please write someone with those ads.

**Send ads to, Orbiteer Editor,  
Mail Zone K4 5502**

Classified ad information appearing in the *Orbiteer* is not a warranty or endorsement and the General Dynamics Corporation does not assume responsibility for or warrant the accuracy or completeness of statements appearing in these advertisements.

**NEXT DEADLINE: COB  
WEDNESDAY, MARCH 23**

**25" SCHWINN SUPER LETOUR BICYCLE,** 12-speed, Shimano derailleurs, quick-release wheels, Avocet geflex saddle, aerobars, toe clips, great condition, \$100. Ellen, +87-1927

**FOR SALE,** RC Planes & equipment, airtronics 4-channel radio, O.S. engine, has been in storage, all for \$80. Brian, 679-0715

**FOR SALE,** Oak/Oak veneer desk, large office style, \$75; Mini-fridge, sub-zero brand, 24Wx33H, \$150; Windsurfer standard, original design, includes mast, booms & sail, \$150. Mike, +87-9281

**FOR SALE,** Cabover camper 8', very nice, queen bed, stove, oven, refrigerator, sleeps 4, butane, 12 volt, 110 volt elect., water pump, AM & FM, 2 stainless sinks, \$500 or best. RJ, +61-9066

**FOR SALE,** 1968 Ford pickup truck F100, 8' bed, 390 eng., auto trans., excellent rubber, heavy-duty springs, 2 fuel tanks, set up for cabover camper, \$1,200 OBO. RJ, +61-9066

**FOR SALE,** 1982 Chevy Malibu station wagon, V-6, 4-door, good condition, price negotiable; Osterizer juicer, \$20; B&W TV, \$25. Sharon, 271-1426

## A Message from the CRA

Please make a note that  
the CRA Easter Egg Hunt  
will not be held this year.

# New System Provides Quicker Access to SPs

In an effort to bring communication to the forefront, the Information Resource Management group brings General Dynamics' Standard Practices (SPs) on-line.

Employees can now access any of the SPs through the Macintoshes in their computer labs just by logging onto the server. With this system, there is no longer a need for people to keep hard copies of the Standard Practices. Looking for information is easier, too. All you do is type in a key word or phrase and a search is made for all SP documents containing that word or phrase. The computer provides a list of the documents selected, and you can quickly scan them to find what you need.

Bill Schiller of IRM set up the system, which is very easy to follow.

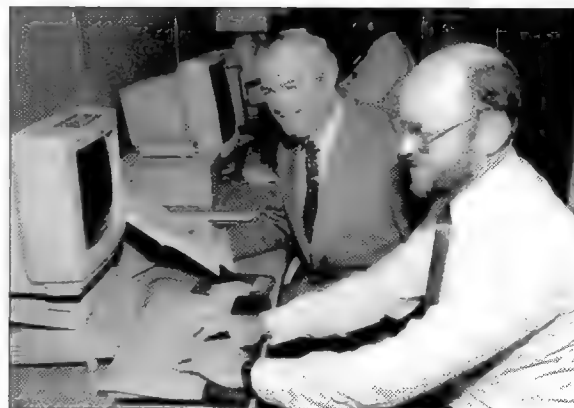
To log on, select Chooser from

the Apple Menu at the top left of the Macintosh screen. When the Chooser window comes up, select the following (see "Chooser" graphic below):

- 1) AppleShare
- 2) Appletalk Zone "SSKM24"
- 3) File server "Business Systems"

Then hit the "OK" key. A "Connect to the file server" window will appear. Click on "Guest" and then hit "OK." A volume selection window will then appear and you should select "Standard Practices" and hit "OK."

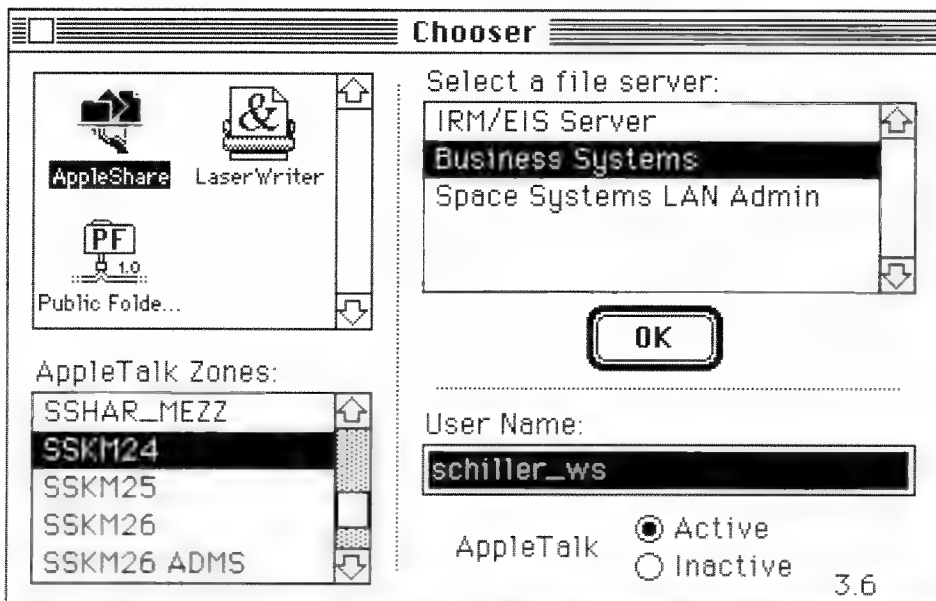
An SS Standard Practices server icon will appear on your screen. Double click on it to access the On-line Standard Practices files. To use the



Bill Schiller of IRM shows Division President Mike Wynne how to access GD's Standard Practices on line.

system, double click on any of the CardFile icons shown.

Bill has a user manual that further explains how to get around in the system. For a copy of this manual, contact him at +3348 or Mail Zone K4-7182. •



The *Orbiteer* is printed on recyclable paper. After reading, please discard in the colored paper recycle bins.



The *Orbiteer*, Space Systems Division's employee newsletter, is published biweekly. Submitted articles will be printed as space permits, at the discretion of the editor. All submissions may be edited per space requirements. Send items of interest to:

## Orbiteer

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(210) 430-7835

Huntsville Reporter: Don Deming  
(205) 922-3323

Space Services Reporter: Dave Bennett  
(407) 783-1236

VAFB Reporter: Barbara Klinedinst  
(805) 734-8232 Ext. 67547

## Space Briefs

**From Community Relations – The American Lung Association is offering a new 1994 Golf Privilege Card.** The \$25 card entitles golfers to play discounted rounds at more than 23 courses in San Diego, with hundreds more in Southern California. Proceeds from the card go toward the fight against lung disease. To order your card, call the American Lung Association at 297-3901.

## Employment Figures

### (Week Ending March 4, 1994)

|                            |              |
|----------------------------|--------------|
| Cape Canaveral AFS         | 513          |
| Commercial Launch Services | 31           |
| Financial Service Center   | 68           |
| GD Space Services          | 39           |
| Hammond                    | 42           |
| Harlingen                  | 226          |
| Huntsville                 | 23           |
| Property Management        | 8            |
| San Diego                  | 2,242        |
| Vandenberg AFB             | 182          |
| <b>TOTAL</b>               | <b>3,374</b> |

## ORBITER

A Biweekly Newsletter for the Employees of Martin Marietta Space Systems

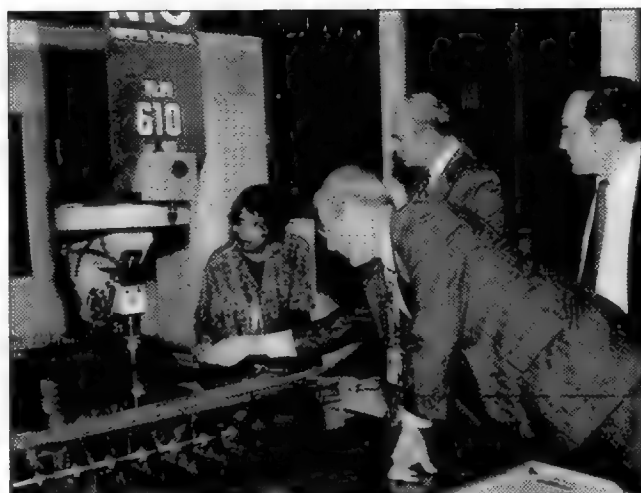
May 20, 1994

# Martin Marietta Corp. Completes GD Space Systems Acquisition

**M**artin Marietta closed on its acquisition of General Dynamics Space Systems on Monday, May 2, officially combining two of the nation's premier space launch vehicle operations. In an address to Space Systems employees in San Diego on May 3, Martin Marietta Chairman and Chief Executive Officer Norm Augustine welcomed the new employees and provided an overview of the corporation's businesses and philosophies.

"The best way to introduce ourselves is to state first that our core values revolve around two overriding principles: Mission Success and a commitment to ethics," he told employees. Martin Marietta is committed to space and defense, he said, and the addition of Space Systems will perpetuate the world-class tradition of both companies. Augustine added that his first professional summer job was with General Dynamics in San Diego and that he has great respect for the people and technology.

*Plant 19's C.J. Graham, demonstrates the laser cutting station to (from left) John Adamoli, MMC program manager and vice president, Norm Augustine, Martin Marietta CEO, and Jim McAnally, president of Martin Marietta Astronautics.*



"This new business combination will benefit our government and commercial customers, enhance our nation's international competitiveness, produce a fair and equitable return for stockholders, and preserve more jobs than either Martin Marietta or General Dynamics could have done alone," he said.

The combination, at a purchase price of \$208.5 million, is expected to generate significant cost savings for the U.S. government and other customers and expands Martin Marietta's business and technology base. The savings would result from combining Space Systems' Atlas and Centaur programs with Martin Marietta's Astronautics business. The Atlas launch vehicles give the corporation intermediate lift

capability, which it previously lacked. The Centaur upper stage is a critical part of Martin Marietta's Titan IV, a heavy-lift vehicle.

The second successful launch on May 3 of a Titan IV, Centaur upper stage carrying a classified Department of Defense payload served to christen the transaction. The first such launch, on Feb. 7, successfully placed the DoD's first Milstar communications satellite into orbit.

Space Systems President Mike Wynne will continue to lead the new Martin Marietta business as general manager and vice president, reporting to Jim McAnally, Astronautics' president. Other personnel and organizational decisions will be made and announced no later than July 15. •

## In This Issue

- **Titan IV/Centaur-10 a Success**
- **Atlas IIA to Launch Hot Bird 2**



## Space Briefs

### Chairman Reports 'Record-Breaking Year' to Stockholders –

Chairman Norm Augustine spoke to some 150 stockholders and invited guests at the company's 33rd annual meeting in Atlanta, Ga., last week. He noted that Martin Marietta strongly outperformed the aerospace industry 5-year index and now ranks 51st among the nation's Fortune 500 companies in sales. "Clearly, [we] will not just be a survivor, but a global leader, as our varied marketplaces complete their transitional phases," he said.

Recalling a year of dramatic progress in the implementation of its "peace dividend" strategy, Augustine said the corporation strengthened its core defense businesses through the combination with GE Aerospace and expanded its civil government and commercial businesses by combining with General Dynamics Space Systems, adding key assets to Materials Company and becoming managing contractor for Sandia National Laboratories.

First quarter results for 1994, up sharply from the same quarter last year, were also reported in the meeting. Net earnings were \$184.6 million or \$1.47 per share fully diluted. This included a non-recurring after-tax gain of \$70.2 million or 56 cents per share from the initial public offering by Martin Marietta Materials, Inc. Excluding this gain, net earnings were \$114.4 million, a 50 percent increase over 1993's first quarter earnings of \$76.4 million.

**Second Titan IV/Centaur a Success –** A Martin Marietta-built Titan IV space booster carrying a classified Department of Defense payload roared into space Tuesday, May 3, at 11:55 a.m. EDT from launch complex 41, at Cape Canaveral Air Station, FL.

This was the second launch of a Titan IV space launch vehicle with the Centaur upper stage. The first

was launched February 7 from Cape Canaveral carrying the Defense Department's first Milstar satellite into geosynchronous orbit 22,300 miles above Earth.

It was the ninth Titan IV launched and the fifth from Cape Canaveral. Four have been launched from Vandenberg Air Force Base, Ca. Titan IV, the nation's largest, most powerful expendable launch vehicle, is built by Martin Marietta Astronautics in Denver. It is capable of boosting 39,000 pounds into low-Earth orbit or 10,000 pounds into geosynchronous orbit.

Martin Marietta has a contract with the U.S. Air Force Space and Missile Systems Center to build and launch 41 Titan IV expendable launch vehicles. Martin Marietta Astronautics' new Space Systems group is under contract to make 13 more of the high-energy Centaur upper stages for Titan IV.

**Atlas' Business Is Hot –** Martin Marietta Commercial Launch Services, Inc. announced on April 29 that it signed a contract with the European Telecommunications Satellite Organization (EUTELSAT) to provide Atlas IIA launch services for the Hot Bird 2 television satellite.

Hot Bird 2, built by Matra Marconi Space, will be positioned after the launch at 13 degrees East where it will join EUTELSAT II-F1 and Hot Bird 1, which is scheduled for launch later this year. The satellite's 20 high-power transponders will be used by television broadcasters for transmissions to direct-to-home, cable and community services throughout Europe.

The contract is for one launch scheduled for August 1996. With this order, the current backlog for all Atlas launch vehicle configurations stands at 30, 25 commercial and 5 military. •

## Astronautics Policy Established to Implement FTC Consent

*By Stephen E. Smith, General Counsel, Astronautics*

*Reprinted from May 6 Astronautics News*

As reported in the April 8 edition of *Astronautics News*, Martin Marietta and the Federal Trade Commission (FTC) entered into a Consent Agreement, dated February 23, 1994. Under the terms of the agreement, which was effective upon the closing of the General Dynamics acquisition, Martin Marietta agreed to take specified steps to protect proprietary information of satellite owners and manufacturers furnished to Astronautics in connection with its expendable launch vehicle business. The agreement also protects information furnished to the former General Dynamics Space Systems Division that was transferred to Astronautics through the acquisition.

Under the agreement, Martin Marietta agreed that with respect to a defined category of such proprietary information known as "non-public information," Martin Marietta would not "provide, disclose or otherwise make available" such information to Martin Marietta Astro Space. The company also agreed that it would use such information only in connection with its expendable launch vehicle business.

To ensure full compliance with the Consent Agreement, Astronautics has established a new procedure, entitled "Proprietary Data Received from Satellite Owners or Manufacturers." Under this procedure, AS 05.03, App A, the Astronautics Director of Contracts will designate a "proprietary data custodian" for each product area, for each satellite launch, where Astronautics (including the former GD Space Systems Division) or its newly activated subsidiary, Martin Marietta

Continued on page 3

# Retirees

|                          |          |
|--------------------------|----------|
| Helen Adesso             |          |
| Secretary                | 17 years |
| Ramon Anspach            |          |
| Eng. Specialist Sr       | 35 years |
| Royce Bray               |          |
| Senior Engineer          | 30 years |
| Timmet Christensen       |          |
| Eng. Specialist Sr       | 35 years |
| Sam Contastr             |          |
| Precision Dev. Tech      | 17 years |
| Richard Crice            |          |
| Engineering Tech         | 15 years |
| Virgil Duduit            |          |
| Base Spvr., Launch Ops   | 30 years |
| Harold Faulwetter        |          |
| Maint. Tooling Welder    | 17 years |
| Robert Fedeh             |          |
| Tech. Buyer              | 10 years |
| Robert Florez            |          |
| M.U. Tooling Builder     | 20 years |
| Louis Foley              |          |
| MA Launch Serv. Tech     | 30 years |
| Norvell Freeman          |          |
| HR Staff Specialist      | 33 years |
| Philip Genser            |          |
| Program Manager          | 30 years |
| Joseph Geraci            |          |
| Calibration Tech. Sr     | 31 years |
| Henry Gonzales           |          |
| Design Drafter           | 5 years  |
| Daniel Healy             |          |
| Sr. Engineer             | 24 years |
| Sharrin Hagnes           |          |
| CM/DM Analyst Sr         | 33 years |
| James Jams               |          |
| Sr. Engineer             | 5 years  |
| James Jensen             |          |
| MA Launch Serv. Tech. Sr | 37 years |
| Agnes Jones              |          |
| Pgm. Control Specialist  | 28 years |
| Samuel Lundermuth        |          |
| Engineering Specialist   | 18 years |
| Ray Livesey              |          |
| Sr. Engineer             | 34 years |
| Ray Lockwood             |          |
| Staff Secretary          | 11 years |
| Edward DeV               |          |
| QA Specialist            | 35 years |
| Barnara Freeman-Malovich |          |
| Customer Rel. Manager    | 36 years |
| Pat Moore                |          |
| QA Specialist Sr         | 0 years  |
| Leon Neugebahr           |          |
| Sr. Production Engineer  | 2 years  |

## New Policy (continued from page 2)

Commercial Launch Services, Inc. (MMCLS) will receive "non-public information." Astronautics' commercial launch business will be conducted through this subsidiary. The proprietary data custodian is the only individual authorized to receive "non-public information" from a satellite owner or manufacturer.

Under the procedure, only individuals who have been authorized by the proprietary data custodian and program manager as having a "need to know" and who have read and understood the standard procedure

may have access to "non-public information." The procedure dictates that such information will be used only in Astronautics' or MMCLS' launch business, and that no such information may be shared with Astro Space. An annual report must be filed by Astronautics with the FTC certifying compliance with this Consent Agreement; therefore, strict adherence to this standard procedure is critical.

All employees are encouraged to review this new standard procedure. Any questions may be directed to the Legal or Contracts departments. •

### Retirees (continued)

|                          |          |
|--------------------------|----------|
| Albert Nolan             |          |
| Engineering Specialist   | 14 years |
| Lloyd Nye                |          |
| Prod. Engineering Spec   | 6 years  |
| Lon Packer               |          |
| Executive Secretary      | 29 years |
| James Patterson          |          |
| Engineering Spec. Sr     | 39 years |
| Jack F. Plinkeke         |          |
| MA Tech. Serv. Tech. Sr  | 30 years |
| Viv Pollard              |          |
| HR Representative        | 10 years |
| Edward Portillo          |          |
| M.U. Mech. System P+H    | 37 years |
| Arthur Rittfel           |          |
| Sr. Engineer             | 13 years |
| Hilbert Romero           |          |
| Missile C.O. Mechanic    | 12 years |
| Edna Rowland             |          |
| Plant Protection Officer | 13 years |
| William Sandell          |          |
| Sr. Buyer                | 6 years  |
| Virginia Seyler          |          |
| Executive Secretary      | 9 years  |
| Leonard Showalter        |          |
| Comm. Designat Spec      | 32 years |
| Robert Spencer           |          |
| Engineering Specialist   | 33 years |
| Beth Stowarski           |          |
| Staff Secretary          | 12 years |
| Robert Thompson          |          |
| Engineering Specialist   | 10 years |
| Jerry Wicks              |          |
| Production Specialist    | 38 years |
| Norville Yarabek         |          |
| Procurement Specialist   | 37 years |
| Steve L. Ziegler         |          |
| Engineering Specialist   | 17 years |

## HR Report

- The Benefits office has moved to the first floor of building 24, column 162Z. The new mail zone is K1-5603. The extensions are the same.
- Division staff, division planning and support personnel (Legal, Public Affairs, Community Relations, Employee Communications), are moving from building 24-4, south, to building 5-1, low bay west. Mail zones change from K4-xxxx to 51-xxxx. All telephone extensions remain the same.
- Astronautics President Jim McAnally holds a weekly staff meeting in Denver on Mondays. The minutes are available on the QuickMail Public Folder under "Staff Notes."
- Contact the following Business Communications staff for Martin Marietta graphic identification materials such as logos, viewgraphs, and business cards.
  - Electronic Publishing – Marian Fite, x41441.
  - Graphics – Curt Johnson, x41407, and John Clinger, x41439.

## People in the News

**Brian Farrow**, a senior accountant in MMCLS, obtained his Juris Doctorate degree from Western State University College of Law after four years of study. Congratulations, Brian!

**Dave Patterson**, Titan Centaur Final Assembly Avionics, has been named the first Security Representative of the Quarter for 1994. Congratulations, Dave! •

# Service Anniversaries

April 1994

## 35 Years

James Morley  
Jesus Ortiz

## 25 Years

Ruth Cameron  
Donald Thibault

## 15 Years

Louis Acker  
Gloyd Campbell, Jr.  
Richard Gilbo  
Jean Howe  
Philip Jeter  
Sandra Munnell  
Joseph Spatelli

## 10 Years

Mario Calabding  
Meredith Carter  
Edward Christensen  
Stephen Cochran  
James Davis  
Robert Gibson  
Cynthia Gonzalez  
Michael Gott  
Penney Gornola  
Michael Henson  
Hal Herolt  
Jeffrey Householder  
Russell Johnson  
Edward King, Jr.  
Daniel Koppinger  
Nancy Linstead  
Linda Nielsen  
Karen Oldenburger  
Ron Olson  
Harold Page

Howard Patterson  
Harriet Preucilos  
Ricardo Reyes  
Beverly Runner  
Guy Wilkerson  
Charity Woods  
Christopher Wright

## 5 Years

Leticia Aquino  
John Anticibatico  
Abe Andari  
Gary Bacuska  
Craig Bullock  
Marcos Castillo  
Hugh Coleman  
Alan Craig  
Barbara DiAversa  
Sylvia Dubois  
Jerome Farrell  
Thomas Freund  
Dean Goussiniani  
Albert Hagopian  
Robert Hatch  
James Izatt  
Joseph Lookensill  
Jeanne Miller  
David Olshori  
Santiago Olivarez  
Richard Pollock  
Glenn Pont  
Robert Porter  
Becca Robertson  
Ben Royal, Jr.  
Thomas Smith  
Jim Solnay  
John Stroud  
Dennis Taber

# Classifieds

FOR SALE, 19" Color TV. Zenith. Excellent condition, just like new. Asking \$100. Call Ray, 549-7842.

FOR SALE, Bedroom Furniture. \$75 ten-drawer, \$50 three-drawer, \$50 four-drawer, and \$25 headboard. Call Ray, 549-7842.

WANTED, Little Tykes Toys - If your kids have outgrown their Little Tykes, I'd like to buy them for my grandkids - house, gym, swings, etc. Mary Alice Getz - 743-3074.

FOR SALE, Precor 714/718e Low Impact Climber. Excellent condition; adjustable tension; battery-operated counter/timer. \$150. Jamie, 292-9295.

FOR SALE, 1982 Chevy Malibu station wagon, V-6, 4-door, good condition, price negotiable. Osterizer juicer. \$20. Camping mattress, \$20. B&W TV, \$25, excellent condition. Call Shawn, 271-1426.

Send ads to: Orbiteer Editor,  
Mail Zone 51-5502

## MARTIN MARIETTA

The Orbiteer, Astronautics Space Systems employee, now better, is published biweekly. Submitted articles will be printed at the discretion of the editor. All submissions may be edited per space requirements. Send items of interest to:

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Managerial Response: Nancy Linstead  
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Managerial Response: John Dunning  
(619) 534-4300

Managerial Response: Mary Anderson  
(619) 534-4300

Managerial Response: William Wheaton  
(619) 534-4300

## Employment Figures

(Week Ending May 6, 1994)

|                           |     |
|---------------------------|-----|
| Space Systems All Sectors | 284 |
| Orbital Sciences          | 53  |
| ODS Space Systems         | 61  |
| Raytheon                  | 58  |
| Hallmark                  | 215 |
| Boeing                    | 21  |
| Satellite                 | 210 |
| Communications All        | 17  |

**TOTAL ..... 5,122**



The Orbiteer is printed on recyclable paper. After reading, please discard in the colored paper recycle bins.

**Communications News - Better Together**, the corporate transition newsletter, and **Astronautics News**, the Denver group's newsletter, will be distributed to employees soon. The Orbiteer will resume its normal printing schedule in June.



# ORBITER

A Biweekly Newsletter for the Employees of Martin Marietta Astronautics, Space Systems

June 24, 1994

## Astronautics Division Announces Consolidation Plan for Space Systems

**S**pace Systems employees received a division notice on June 16 that announced the consolidation plan for Space Systems with Martin Marietta Astronautics. Below are the answers to some of the questions that you may have concerning this consolidation.

**Q** What are the objectives of the transition plan?

**A**

- To be transparent to all our customers.
- To maintain Mission Success with no disruptions.
- To minimize costs.
- To minimize disruption to the Atlas and Titan programs.
- To ensure program services.
- To maximize relocation of critical personnel and capabilities.
- To maintain overlapping, duplicate production for as long as necessary to ensure critical Atlas and Centaur launch schedules.

**Q** How are employees being informed that they are being asked to transfer to Denver?

**A** Offers will be made in phases. Once an offer is made, Human Resources will meet with those employees to provide a schedule of benefits and relocation meetings.

**Q** If an employee has not received an offer, does that mean he/she will be laid off?

**A** No. If an offer has not been received, that does not mean automatic layoff. The work force remaining in San Diego will be reduced incrementally as the transfer process reduces the employment level and, therefore, the additional support required in San Diego. Also, incentives will be offered under certain conditions to employees who are not transferring to Denver and who stay in

San Diego until the end of their required assignment.

**Q** How will employees being laid off be notified?

**A** Employees affected will be notified at the appropriate time by their individual supervisors.

**Q** What layoff policy will be in effect?

**A** In San Diego, we will follow the standard 60-day notice policy. A new career center will assist employees who will be laid off or who leave voluntarily to find new jobs. Assistance will include job lead

Continued on page 2

### AC-76 Update

As of print time for this issue of the *Orbiter*, AC-76 was scheduled for launch at 6:45 a.m. PDT, June 24. Look for coverage of this launch in the July 8 issue of the *Orbiter*.

### Thousands Flock San Diego Facilities for Open House

See page 3 for additional photos



# Consolidation Q & As

Continued from page 1

development, resume preparation assistance, a variety of related workshops, and other services such as free use of telephones, computers and copiers.

## Q What relocation package is being offered to employees transferring to Denver?

A Employees are being relocated in accordance with existing Martin Marietta policy.

## Q Are you using a relocation service?

A Relocation Concepts, Inc., a Denver-based company, has been retained to provide relocation services.

## Q Why are the moves taking place so quickly?

A The move timelines are being planned to minimize disruption in the programs. There is a significant window of opportunity from the production and launch standpoint for moves to take place in the August-September timeframe. Where possible, employees with school-age children need to move quickly.

## Q What happens to Space Magnetics?

A This group will remain in San Diego at the Kearny Mesa Facility.

## Q What happens to Plant 19?

A Plant 19 production remains in place in San Diego for the long term.

## Q What happens to our office in Huntsville, AL?

A This office will remain in Huntsville.

## Q What happens to our Cape Canaveral and Vandenberg AFB operations?

A Retired Air Force General Forrest McCartney is leading a study of Cape Canaveral and Vandenberg operations to determine how best to combine the company's two launch teams. Those plans will be announced by July 15.

## Q Over how long a period will the consolidation take place?

A The forecast is that consolidation will take place over an 18-month period. The targets are that 1,000 people will remain in San Diego by the end of 1994, primarily in Building 5 and Plant 19 production, and about 300 by the end of 1995. The majority of moves to Denver will take place by year-end.

## Q What moves in the near term?

A Atlas Reliability Enhancement Program and Intermediate Expendable Launch Vehicle have begun moving to Denver, followed by the Titan/Centaur program office and related engineering and support.

## Q In which facilities will transferring employees work?

A The majority will be at the Waterton facility with some at South Park West, Deer Creek and Southbridge.

## Q Where will Atlas production be located?

A A building at the Waterton facility is being modified to house Atlas and Centaur production. •

# Retirees

## Jerry Arnold

Design Drafter ..... 35 years

## Thomas Dangelo

Engineering Chief ..... 35 years

## W. Judd Giesenschlag

Program Director ..... 39 years

## Lester Green

QA Specialist Sr. .... 38 years

## Robert Greger

Plant Protection Officer ... 8 years

## David Hackley

Division Vice President &  
Program Director ..... 36 years

## David Harrell

Engineering Specialist ..... 6 years

## Maron Hawkins

Industrial Secty Equipment  
Technician ..... 24 years

## James Heffron

Program Director ..... 35 years

## Vance Hoaglund

Material Project  
Administrator ..... 36 years

## Richard Jones

Program Director ..... 38 years

## John Medina

Plant Protection Officer . 37 years

## Robert Mendoza

Missile Assembler ..... 44 years

## James Mildice

Engineering  
Specialist Sr. .... 35 years

## William Nagy

Engineering Specialist ... 27 years

## John Niesley

Program Manager ..... 36 years

## Robert Orr

Technical Buyer ..... 25 years

## Philip Pond

Manufacturing Development  
Technician ..... 35 years

## David aomsay

Engineering  
Specialist Sr. .... 35 years

## Vasco Rodrigues

Plant Protection Officer . 19 years

## Donald Sandberg

Production Supervisor ... 39 years

## Keith Taylor

QA Specialist ..... 34 years

## David Walker

Engineering  
Specialist Sr. .... 15 years

## Verl Walker

Engineering Specialist ..... 36 years

# San Diego Facility Open House

Over 6,000 people attended the Factory Open House held June 11 in San Diego. Employees and their families enjoyed the self-guided tours and the snacks, as well as the giveaways at the end of the tour route. Thanks to all of the volunteers who made this day so great for everyone! •



## Space Briefs

**Make Note of Division Ethics Hotline Number** – The Space Systems Ethics Hotline phone number was misprinted in the April Space Systems Telephone Directory. The correct number is (619) 974-3262.

**Join Your Friends at Crossroads – The Reunion 1994** – All current and former employees of Space Systems, Convair, Hughes, GDE Systems and CSC are invited to Missile Park in Kearny Mesa on July 10 for a reunion picnic and party. The event will start at 10:30 a.m. and will

last until 4 p.m. For \$6 per adult, \$2 per child ages 6 - 16 (children under 5 are free), you get use of all of the park's activities, including music by a DJ and free beverages. Bring your own food. There will be door prizes, so this event is one not to be missed. For more information, contact Rae Blaha or Gil Gonzalez at x38739.

**CRA Players To Hold Auditions** – The CRA's own theatre troupe, the CRA Players, will be holding auditions for their next production, Agatha Christie's

"Ten Little Indians," on June 25 and 27 in the CRA Clubhouse. There are roles for eight men (ages mid-20s to 65-plus) and two women (ages mid-30s to 55-plus). The show opens August 12. For more information, contact the group's box office at 226-5126.

**Don't Forget the Atlas Launch Hotline** – The Atlas Launch Hotline, (619) 573-8769, is activated one week prior to a scheduled launch. Call it for information on upcoming launch activities. •



# Service Anniversaries

May 1994

## 40 Years

Jon Treat

## 35 Years

Jack Bishop  
Ralph Gibson  
Richard Moritz

## 30 Years

Deanna Moreno

## 25 Years

David Preston

## 20 Years

Ronald Blunck  
Richard Hattings  
Colleen Marasco  
Kenneth Quinn

## 15 Years

Robert Churchill  
John DeDonato  
Thomas DeShon  
Robert Johnson  
Joseph Knapp  
Eliseo Lumbres  
Eduardo Merlino  
Martha Rodriguez  
Julie Slater

## 10 Years

Millard Francis  
Mark Hersom  
Douglas Kary  
Ann King  
Bernard Kozlosky  
Sherrie Lo Cicero  
Joseph Lucente  
Richard Markey  
Juan Moreno  
Richard Scharf  
Joan Schuler  
Michael Schweitzer

## 10 Years (Continued)

Gopal Shah  
William Swanson  
Sherry Tucker  
Douglas Vaughan

## 5 Years

Kathy Aulston  
Andres Ayala, Jr.  
Frank Billingham  
Loree Bloom  
Clifton Bozarth  
Borden Bruce  
Hamlet Caesar  
Paul Carlander  
Rodolfo Cavazos  
Joseph Clark  
Michael Clark  
Damien Donnelly  
Elpidio Ebuon  
Jeffrey Flachman  
Pamela Galvan  
Rosalinda Galvan  
Craig Haddad  
Richard Horne  
Randy Housel  
James Hughes  
Linda Jarvis  
Christine Logan  
Samuel Long  
Gregory Mehle  
Terrel Miles  
Edward Morse  
Tuan Nguyen  
Sharon Orlando  
Scott Person  
John Ramer  
James Roberts, Jr.  
Kyle Shepard  
Lola Spencer  
William Stone  
Joan Underwood  
Richard Webb  
Rudy Zimmerman, III

If you missed the Open House and would like one of the new Titan IV posters, contact Public Affairs at x41406.

(limit: one per employee)



The *Orbiteer* is printed on recyclable paper. After reading, please discard in the colored paper recycle bins.

## Employment Figures

(Week Ending June 10, 1994)

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Commercial Launch Services ..... 33  
GD Space Services ..... 41  
Hammond ..... 35  
Harlingen ..... 215  
Huntsville ..... 23  
San Diego ..... 2,068  
Vandenberg AFB ..... 181

**TOTAL..... 3,101**

## Published by Public Affairs

Deanna Wheaton-Titzler, Editor

(619) 974-1406

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## ORBITER

A Biweekly Newsletter for the Employees of Martin Marietta Astronautics, Space Systems

July 8, 1994

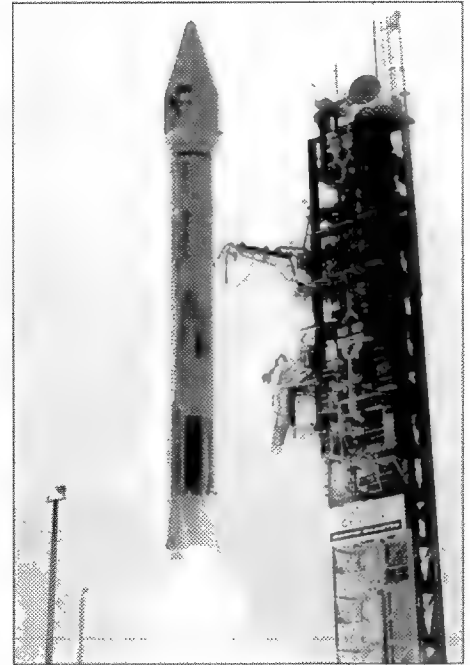
# AC-76 Launches Navy Satellite

**A**C-76 roared off Space Launch Complex 36B at Cape Canaveral Air Station, FL, at 9:50 a.m. EDT on Friday, June 24, carrying the U.S. Navy Ultra-High Frequency (UHF) Follow-on F3 satellite into orbit.

"We are proud to have provided a successful launch and a good ride to orbit for Hughes and the Navy, whose communication mission is so important for the U.S. military," Space Systems General Manager Mike Wynne said. "And we are proud to have achieved 100 percent mission success with the Martin Marietta name riding on top of the best launch vehicle in space."

Space Systems is under contract to Hughes Space and Communications Company to launch up to six more spacecraft in the U.S. Navy UHF Follow on

Continued on page 3



## Industrial Security Wins 1994 James S. Cogswell Award

**T**he San Diego Space Systems facility has been named a winner of the prestigious James S. Cogswell Award for sustained excellence in industrial security. This is a national award given to those few contractor facilities qualifying after rigid selection criteria.

The Cogswell Award is given every year to recognize exceptional performance by Department of Defense contractors participating in the Defense Industrial Security Program (DISP). Less than one-half of one percent of the eligible facilities receive this award each year. The Cogswell is seen by our government customers as an extremely significant achievement.

The award recognizes the fine efforts of the Security staff as well as the efforts of every division employee. Achieving this distinction requires

By Nancy Sexton, Industrial Security

**Less than one-half  
of one percent of  
the eligible  
facilities are  
recognized  
annually with the  
Cogswell Award for  
sustained  
excellence in  
industrial security.**

excellence at all levels and a cooperative effort by management, Industrial Security and the facility employees. One of the criteria for winning this award is "employees' willingness and ability to comply with security requirements as revealed through security inspections. A work force effectively educated and motivated to properly protect classified information."

Thanks go to all division employees for their ongoing support of the Industrial Security program.

Division President and General Manager Mike Wynne will accompany Archie Yates, manager of the Industrial Security department, to the National Classification Management Society annual convention in Salt Lake City, UT, later this summer to accept the award. •

# Space Systems Completes Acoustic Test Program for NASA

By Mark Gehringer, Atlas Test Labs – Engineering Specialist

Payload fairing interior sound levels cause vibrations to a spacecraft and are a critical environmental factor for Space Systems and our customers. Data gathered from a recently completed test program will greatly enhance NASA's and our ability to accurately predict in-flight acoustic exposure levels for current and future spacecraft.

To meet the unique requirements of the test program, engineers took advantage of the advanced capabilities of the 100,000-watt Acoustic and Thermal Test Facility (ATTF). The program was set up to determine how fairing interior sound levels change depending on the size and shape of a spacecraft. A 14-foot-diameter payload fairing was tested in a simulated launch acoustic environment with different spacecraft simulators inside the fairing. Microphones and accelerometers were mounted in the fairing to measure sound and vibration levels.

Challenging requirements such as precise handling of large and delicate hardware, rapid data processing and tight-tolerance acoustic spectrum control were met and in many cases exceeded by the test team using the ATTF.

This team included engineers and technicians from both the Atlas and Titan/Centaur

Engineering Test Labs, along with personnel from several other groups. Major support was provided by the Transportation department riggers and by analysis engineers from the Atlas Systems Engineering and Mission Integration areas. On-site NASA and technical subcontractor personnel were also instrumental in making the program a success.

Through their dedicated efforts, team members completed this challenging project on schedule. NASA and Space System engineers will be using the test data to refine their analytical acoustic models over the next several months, providing increased confidence in mission success. •



**Photo above:** This team just completed tests on spacecraft in-flight acoustic exposure levels for NASA. They are standing in front of a payload fairing with the EOS spacecraft simulator. Pictured (top row): Dicky Crice, Doug McKay, Ron Jones, Jim Reynolds, Jack Graham; (bottom row): Chris Gibson, Mark Gehringer, Bob Keith, George Zuniga, Ben Johnson, and Bill Diaz.



**Photo at left:** Bob Keith prepares the test article for an upcoming acoustic test in the ATTF.

## Enhancements Made to the PSP Voice Response System

Two new enhancements have been made to the Performance Sharing Plan (PSP) voice response system: 1) rates of return for each month since May 1993, and 2) copies of statements for the prior calendar quarter.

### Accessing Rates of Return

You can hear the rates of return in Module 5, which is a new module on the PSP system. When you call the PSP system, dial "5" from the main menu. You will be prompted to enter a month and year for the rates of return you wish to hear – for example, "0294" for February 1994. The system will tell you the rates of return for the five funds for the month you requested. You can then request that the information be repeated, or you can enter a different month and year.

### Requesting a Copy of Your Statement for the Prior Calendar Quarter

You can request a copy of your statement for the prior calendar quarter in the Account Balance Module, which is Option 1 on the main menu. For example, if you request a copy of your statement on June 17, 1994, you will receive a statement for the first calendar quarter of 1994 (the period of January 1 to March 31).

Once in the account balance module, the fourth option is quarterly statements on demand. When you enter a "4" into your telephone, the system will prompt you to confirm your request for the statement. Statements requested by midnight Eastern time on the last day of the month will be mailed by the tenth business day of the next month. •

# UHF Satellite Working Well AC-76 Launch

(continued from page 1)

According to a spokesperson with Hughes Space and Communications Company, the UHF Follow-On F3 satellite launched June 24 on AC-76 is working quite well.

The spacecraft is going through maneuvers to place it in its final geosynchronous orbit. All motor firings for these maneuvers have been nominal.

The UHF Follow-On communications satellites will replace the Navy's Leasat satellites, which currently support the Navy's global communications network serving ships at sea and a variety of other U.S. military fixed and mobile terminals.



The new spacecraft will be compatible with ground- and sea-based communications terminals already in service. They will use the same frequency spectrum as the current constellation, but with an increased number of transmitters, providing an increase in communications capacity. •

*The UHF Follow-On F3 satellite undergoes mass property testing at Hughes Space and Communications Company facilities in El Segundo, CA. The satellite measures approximately 11 feet on a side in this configuration, with solar panels and rectangular white receive antenna folded as they were for launch. Transmit antennas are arrayed on top. (Hughes Space and Communications Company photo)*

program. UHF Follow-on satellites are replacing the Fleet Satellite Communications and Leasat spacecraft presently supporting the Navy's communication network.

Due to an uplink problem, this launch was not broadcast live. However, a video of launch highlights is available for checkout through the video library exchange by contacting Public Affairs at x41406. •

## Space Systems Gives Science Fair Awards

Two San Diego students received awards from Space Systems for their projects in the 1994 Greater San Diego Science and Engineering Fair.

James Merrill Kring, a 12th grader at Mt. Miguel High School, received a \$500 check for his project entitled "Wind Energy Used to Power a Boat into the Wind." A \$200 check was presented to 8th grader Denise P. Tung, a student at Challenger Junior High, for her project "Earthquake on a Flexible Foundation."

These students were recognized for their efforts to demonstrate the necessary skills and talents in a science and engineering application.

Space Systems also recently sponsored a scholarship through the Society of Women Engineers, San Diego chapter. Marisela Segawa, a junior studying electrical engineering at the University of California, San Diego, received a \$2,000 scholarship. Marisela has been on the Provost's Honors List since 1992 and is active in MESA as a math tutor and student speaker. She is also a member of the UCSD student section of the Society of Hispanic Professional Engineers. •

## Space Briefs

**Hammond Facility Donates Computers to Local Schools** – The Tangipahoa Parish School System in Hammond, LA, received seven computers and five printers from the Space Systems Hammond Facility on June 29. Robert Grunewald, Hammond Facility site director, and Lee Galloway of Computer Sciences Corporation presented the equipment to Vicki Allen, supervisor of the school district's Data Processing Center.

**Join Your Friends at Crossroads – The Reunion 1994** – All current and former employees of Space Systems, Convair, Hughes, GDE Systems and CSC are invited to Missile Park in Kearny Mesa on July 10 for a reunion picnic and party. The event will start at 10:30 a.m. and will last until 4 p.m. For \$6 per adult, \$2 per child ages 6 - 16 (children under 5 are free), you get use of all of the park's activities, including music by a DJ and free beverages. Bring your own food. There will be door prizes, so this event is

one not to be missed. For more information, contact Rae Blaha or Gil Gonzalez at x38739.

**Space Systems Paycheck Stubs Won't Change til 1995** – An article in the most recent *Astronautics News* mentioned that Astronautics employees now have new paycheck stubs that reflect their new flex benefits program. Since Space Systems employees will not be covered under this new benefits program until January 1995, our paycheck stubs will not change until that time.

**Air Force's Atlas Launch Team Named Top Squad in World Competition** – The 45th Space Wing's 3rd Launch Squadron was named best spacelift team in the Air Force Space Command during the 1994 Guardian Challenge. This squadron is the Air Force's Atlas launch team. More than 60 squadrons competed in this challenge. •



# Meet Your Security Officers



by Helen Solomon, Kearny Mesa Physical Security Services officer

Each day, as you pass through a gate at Space Systems, a security officer greets you and inspects your belongings. You may not be aware, however, that the duties of these officers go beyond operating a post and regulating the entry of employees and visitors to our facilities.

The primary objective of the Physical Security Services group, which is part of the Security department, is to guard against loss, damage, theft, sabotage and espionage. This 100-person group operates around the clock, including weekends and holidays, on a three-shift rotation. Officers are frequently assigned to specific locations and safeguard or control access to classified material.

Officers also patrol the facilities, protecting company and personal property. Officers with appropriate clearances are assigned to perform security clock routes throughout facilities utilizing bar codes placed in important areas. All areas are checked for security violations, fire hazards and emergency conditions. The group works with the Emergency Control Center and Fire Department to report and assist in emergency situations.

Training and experience levels generally run high among the security officers. Many of them have extensive military, law enforcement or security experience. Also, all officers are state-certified in firearm safety and must qualify with a firearm on a yearly basis. When Security officers join our company, they are trained on all aspects of our security requirements. Officers must have extensive knowledge of operations and specific facility security requirements.

Rest assured, our security officers strive to maintain a safe working environment. •

## Fleet Space Theatre Celebrates Spaceweek

On July 20, 1969, Astronaut Neil Armstrong stepped onto the Moon. Spaceweek, an international public forum held annually, marks the anniversary of this first manned lunar landing. The Reuben H. Fleet Space Theatre and Science Center will be holding special events for Spaceweek during July 16 - 24.

At 6:30 p.m. on July 20, join author and scientist David Brin for his lecture "Six Years until 2001: Is the Dream Still Alive?" There is no fee for this event. This Spaceweek lecture is presented in cooperation with Martin Marietta. At 7:30 p.m. Dr. Brin will sign copies of his latest novel, "Glory Season."

The Space Theatre will offer special screenings of "For All Mankind" twice daily throughout Spaceweek. This showing costs \$7.50 for adults, \$5 for children ages 5 - 15, and \$6 for seniors (ages 65-plus).

Also, commemorative Spaceweek '94 posters are available in the Reuben H. Fleet Science Store.

For more information on these and other Spaceweek activities, contact the Space Theatre at 238-1233. •

## Employment Figures

(Week Ending June 24, 1994)

|                                  |       |
|----------------------------------|-------|
| Cape Canaveral Air Station ..... | 505   |
| Commercial Launch Services ..... | 31    |
| GD Space Services .....          | 11    |
| Hammond .....                    | 31    |
| Harlingen .....                  | 220   |
| Huntsville .....                 | 23    |
| San Diego .....                  | 2,051 |
| Vandenberg AFB .....             | 180   |

**TOTAL..... 3,091**

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**MARTIN MARIETTA**

# ORBITER

A Biweekly Newsletter for the Employees of Martin Marietta Astronautics, Space Systems

August 5, 1994

## SpaceArc Time Capsule Will Be Out of this World

By Todd Halvorson, Florida Today

Reprinted, with permission, from Florida Today, Monday, July 25, 1994, Issue

A 14-story Atlas rocket is to blast off this week from Cape Canaveral Air Station, carrying Vice President Al Gore and the late Jimi Hendrix into orbit.

Symbolically speaking that is.

Mounted atop the Martin Marietta Atlas, which is set for launch Thursday, is a \$200 million DIRECTV™ Inc. satellite to beam television broadcasts.

Also housed inside the craft is a high-tech time capsule that will boost the digital thoughts, letters and music of 41,000 Earthlings to new heights.

"The principle is the same as putting a time capsule in the foundation of a building," said Reich Van Dussen, a spokesman for the Rochester Museum & Science Center in Rochester, NY, which sponsored the nonprofit project.

"We're just taking it a step further."

About 22,300 miles farther.

Dubbed SpaceArc, the time capsule is an optical storage device that holds digitized photographs, essays, poems, drawings and musical compositions from around the world.

Among the contributions to the eight-pound capsule:

- Special musical recordings from rock singer Peter Gabriel, Jethro Tull flutist Ian Anderson and the late Jimi Hendrix.

Rochester Museum & Science Center  
SpaceArc Project  
Director James Ferren (right) stands with Eddy Hartenstein, president of Hughes Communications, DIRECTV™. Ferren is holding the SpaceArc capsule that will carry messages into a permanent Earth orbit. Behind them is the DIRECTV satellite that will "piggyback" the satellite into space. (Rochester Museum & Science Center photo)



- Letters from Vice President Al Gore and Dan Quayle.
- An essay on humankind's destiny in space from Arthur C. Clarke, the

author of *2001: A Space Odyssey*.

The Clarke contribution is particularly appropriate: The idea of

*continued on page 2*

## Tests, Weather Force AC-107 to Reschedule

Wild summer weather and the need to complete additional prelaunch testing caused the launch of AC-107 and a DIRECTV™ Direct Broadcasting Satellite-2 (DBS-2) to be tentatively rescheduled for sometime this past week. *Orbiter* production deadlines made it impossible to feature the launch in this issue. Watch for complete launch coverage in the August 19 issue. •

## SpaceArc®

continued from page 1

putting communications satellites into orbits 22,300 miles above Earth was his brainchild in the 1940s.

Less notable but no less important contributions were made by:

- Hundreds of school children from around the world.
- Students who took dictation from seniors in nursing homes.

**“It could be a future society from Earth, or people from another planet might swing by and open it.”**

*Reich Van Dussen, Rochester Museum & Science Center*

“That was a very interesting intergenerational exchange,” said SpacArc project director Jim Ferren, who conceived the space time capsule idea in a 10th grade English essay in 1972.

The capsule also includes poignant messages from hundreds of parents whose children have been lost to disease, crime or accidents.

“Some of those letters are so sadly tragic, but this gave those parents a way to make sure their children are remembered well into the future,” Ferren said.

The SpaceArc archives of humanity will remain inside the DIRECTV™ television satellite during its anticipated 12-year lifespan.

“It could be a future society from Earth, or people from another planet might swing by and open it,” Van Dussen said. •

## Space Briefs

### **Martin Marietta Posts 30% Jump in Second-Quarter Earnings**

— Martin Marietta Corporation (NYSE:ML) reported on July 26 second-quarter 1996 earnings of \$163 million, or \$1.29 per fully diluted share. These results represent increases of 31% and 30%, respectively, over second-quarter 1993 results of \$125 million and \$0.99 per share. Sales declined 4.7%, or \$122 million, to \$2.49 billion compared with the same 1993 quarter.

“These results, the first to include comparable contributions from former GE Aerospace businesses, confirm our confidence in the benefits of being at the forefront of the consolidation of the U.S. aerospace industry,” said Norman R. Augustine, Martin Marietta chairman and chief executive officer. Augustine indicated that the consolidation is producing significant cost reductions for customers and commensurately increasing the corporation’s competitiveness.

The quarter’s results included offsetting effects from two significant events. Included in other income was a \$50-million one-time pre-tax gain representing receipt of the “break-up” fee paid by Grumman Corporation for terminating its merger agreement with Martin Marietta in April.

Operating earnings were adversely impacted by a \$37-million pre-tax charge taken against the PW4168 jet engine thrust reverser program, reflecting higher-than-anticipated costs expected over the balance of the fixed-price contract. The program passes two key milestones in the quarter, receiving airworthiness certifications from U.S. and international aviation authorities.

Second-quarter results were the first to include contributions from the former Space Systems Division of General Dynamics, which the Corporation acquired on May 2. Space Group achieved two program milestones during the quarter: in

June, the first launch of an Atlas booster under the consolidated former GD Space Systems and Martin Marietta management, placing a U.S. Navy communications satellite into orbit; and the second successful launch of its Titan IV Centaur launch vehicle in May. Group sales were up slightly from last year’s quarter at about \$880 million.

For the six months ending June 30, 1994, net earnings were \$347 million, or \$2.76 per share fully diluted. Included in these results is a nonrecurring after-tax gain of \$70.2 million, or \$0.56 per share, resulting from Martin Marietta Materials’ initial public offering in the first quarter. Comparable results for the same period in 1993, prior to the cumulative effect of accounting changes, were net earnings of \$200 million and fully diluted earnings per share of \$1.81. Sales for the six-month period in 1994 were \$4.53 billion, up 20% from \$3.78 billion recorded for the first six months of 1993.

Backlog at the end of the quarter was \$17.6 billion, compared with \$18.4 billion on June 30, 1993, reflecting to some extent the multi-year character of several existing contracts. •

### **GD Announces Second Quarter Results**

— General Dynamics Corporation announced on July 21 second quarter 1994 earnings from continuing operations of \$56 million, or \$0.88 per share. 1993 second quarter earnings from continuing operations were \$54 million, or \$0.85 per share, excluding a previously reported nonrecurring net gain of \$9 million. Including this gain, 1993 second quarter earnings from continuing operations were \$63 million, or \$1.00 per share. Historic per-share amounts have been restated to reflect a two-for-one stock split, which was effected as a 100% stock dividend in April 1994. •

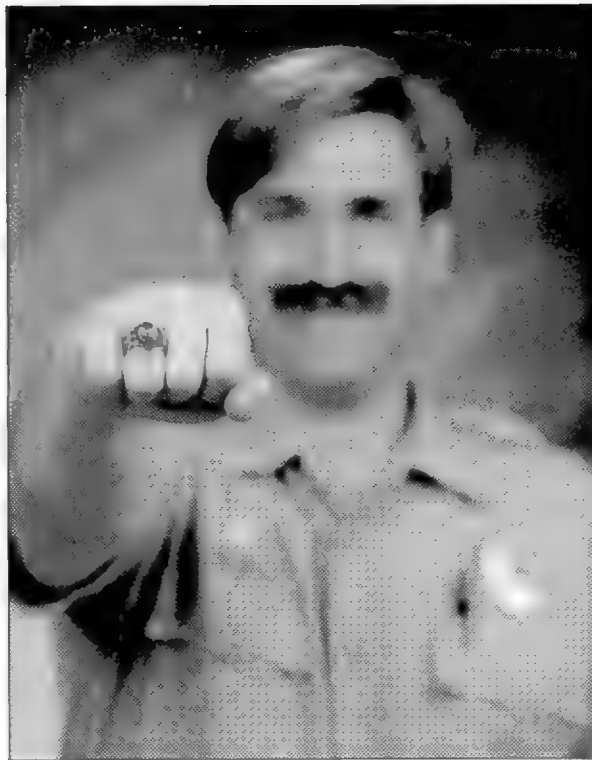
## Reports of Random Acts of Kindness Prove to be True

You may have heard the saying about random acts of kindness, but Tom Otte, a Physical Security Services officer for Space Systems, recently experienced one.

Back in 1977, when Tom was a senior in high school, he lost his class ring at a park in El Cajon. He thought it had fallen under some bleachers in the park but after looking for a while he couldn't find it. Tom never told his father his ring was missing. He had only had it for two weeks.

Flash forward to 1994. A few weeks ago, Tom's father received a phone call from a man who found a class ring from Marian High School, a small Catholic School in the South Bay. According to this man, the ring had Tom's name in it.

"My dad thought the man was nuts, but took down his name and number and called me anyway," Tom said.



*Tom Otte, Physical Security Services officer, shows off the class ring that he lost 17 years ago. When you see him at the gate, ask to take a look at it.*

taking it home and cleaning it he found Tom's name inside.

Tom says the ring is in perfect condition. "Some of my old classmates still wear their rings and they are all beat up – but mine looks like it's brand new!"

That's when Tom finally told his dad what had happened 17 years before.

Tom contacted the man and got his ring back. Evidently, the man had been out with his metal detector going over the ground in the park. Near the bathrooms he found the ring. After

The man who discovered the ring wasn't looking for a reward, and even refused the money Tom offered him for finding it. But the man did accept a new Atlas hat.

"It's nice to see someone these days who is willing to do a good deed and spend time to do a random act of kindness," Tom said. •

## CLS Hosts DoT Visitors

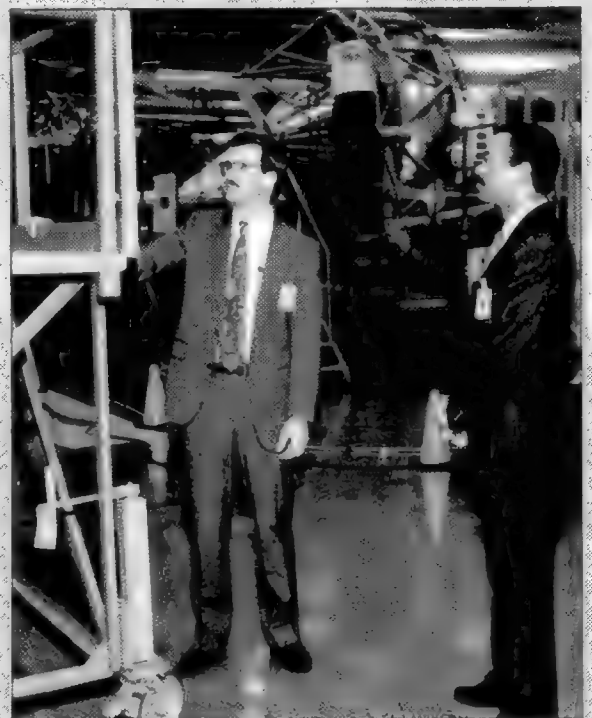
Frank Weaver, Executive Director of the U.S. Department of Transportation, Office of Commercial Space Transportation, and Linda Strine, DoT Public Affairs, toured Space Systems facilities in one stop on their week-long tour of West Coast aerospace contractors.

Weaver, an advocate of the U.S. space launch industry, met with Commercial Launch Services President Mike Wash to discuss international policy issues, non-market economy competition, and how the U.S. DoT can help by

providing support with the launch infrastructure.

Weaver and Strine went on tours of both Kearny Mesa Building 5 and Plant 19 •

*Production Manager Dan Marshall shows Frank Weaver around the Kearny Mesa Booster Final Assembly Area in Building 5.*





## Mystery and Murder Return to the CRA Stage

The CRA Players proudly present their latest production, Agatha Christie's murder mystery "Ten Little Indians." This thriller, which is directed by Brent A. Stringfield and co-produced by Deanna Titzler and Bret Kudlicki, opens August 12 in the CRA Clubhouse.

The show stars Lois Miller, Gordon Mullinger, Quentin Decker, Candace Soules, Ted Falagan, Brynner Paulette, Orrick Smith, John Boaz, Monica Van Der Werf, William Ferguson, and Robert Shadbolt. Eight guests and two hired servants visit a charming country house on an island where they are enchanted by the atmosphere. After noticing a cluster of ten little Indian statuettes on the mantelpiece and a print of the nursery rhyme detailing the death of each Indian, the visitors enter a weekend of death and mystery.

As each statuette topples to the ground another person dies. Everyone is suspicious as they go through the gruesome (and sometimes comical) details, involving clues, explanations and terror.

Production dates are August 12, 13, 19, 20, 21, 26, 27 and 28, with Friday and Saturday performances at 8 p.m. and Sunday shows at 5 p.m. Ticket prices are \$5 (advance/reserved), \$7 (at the door), and \$4 (for groups of 10 or more). Children 10 and under are admitted free.

If you are interested in figuring out who-dun-it in this wonderful classic, call the CRA Players box office to reserve your seat. CRA PLAYERS BOX OFFICE: 226-5126. •

## Packer Named Security Rep of the Quarter

Sam Packer of Atlas Configuration Control has been named the Security Representative of the Quarter for the second quarter of 1994. This award recognizes Sam's long-term involvement with the Security Rep program and his sustained extra efforts to maintain an excellent security posture in his department.

Sam is an example of the kind of active employee involvement that helped the division win the 1994 Cogswell Award for excellence in Industrial Security. Congratulations, Sam! •

### The Big Question:

## Who Has the Recipe?

*Reprinted, with permission, from the July 25 Convair Weekly Log.*

**Q** We know that Hughes bought the cruise missile business segment and moved it to Tucson. We know that Martin Marietta bought Space Systems and is moving most of it to Denver. What we need to know is whose proprietary property is the chocolate chip cookie recipe and will we still be able to buy them at lunch?

**A** The Canteen Corporation that provides the food service in our cafeterias prepares the cookie mix that is used in all "Convair" cookies. Canteen will continue to provide a lunch service and cookies at Kearny Mesa and Lindbergh Field as long as it is economically viable for them. Canteen will continue to provide cookies to Plant 19 when requested. •

If you would like one of the new Titan IV posters, contact Public Affairs at x41406.

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(805) 734-8232 Ext. 67547

**MARTIN MARIETTA**

## Employment Figures

### (Week Ending July 22, 1994)

|                            |       |
|----------------------------|-------|
| Cape Canaveral Air Station | 505   |
| Commercial Launch Services | 34    |
| GD Space Services          | 40    |
| Hammond                    | 30    |
| Harlingen                  | 219   |
| Huntsville                 | 23    |
| San Diego                  | 2,030 |
| Vandenberg AFB             | 178   |

**TOTAL..... 3,059**



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# ORBITEER

A Biweekly Newsletter for the Employees of Martin Marietta Astronautics, Space Systems

August 15, 1994

## AN ORBITEER SPECIAL EDITION Transition Issues and Answers for San Diego and Denver Employees

**E**mbedded in the business decision to consolidate Space Systems and Astronautics work forces by gradually transitioning work activities from San Diego to Denver is our commitment to continuously focus on our employees. A smooth, open transition over the next 18 months is the only way we can ensure Mission Success.

As we move operations, it is essential that we not compromise technical excellence, product quality, schedule integrity and cost commitments. Equally important is that we not abandon our rich heritage of demonstrating our high regard for employees who have enabled Space Systems to earn a highly respected reputation in our industry.

Consolidation and transition to Denver will mean that those remaining in San Diego, not associated with Plant 19 or Magnetics, will ultimately face the loss of their jobs. This is difficult and will require great understanding even with the planned completion incentive considered.

To minimize your concerns and to help everyone stay focused on the work at hand throughout this transition period, we have put in place several Transition Topics, which are discussed briefly in this special issue of the *Orbiteer*.

Michael W. Wynne  
Vice President and General Manager, Space Systems

### Q&A on Consolidation, Transition, Relocation

**Q** San Diego employees are fearful that they will move themselves and their families to Denver and then get laid off in a year. Please address their fears.

**A** It is our desire that all of the Space Systems employees know that we value and are firmly committed to them whether they move to Denver or not. A relocation is an investment in the individual as well as the product line. Our intent, based on current forecasts, is to keep our new Denver employees with us for the long term. We want a return on our investment, so it doesn't make sense for us to lay off people after incurring the expense of moving them to Denver.

### Step-by-Step: The Job Offer Process

*You've heard about others going through the process. But what really happens when you get an offer? What follows is a walk through the process of being offered a job in Denver.*

You will receive your offer letter from your supervisor. This letter includes your job title, salary, the date you are needed in Denver, and the person you are to report to.

The first thing you need to do is attend a relocation seminar with a San

Diego Human Resources representative, pick up a relocation notebook, and discuss any initial questions you may have.

The relocation notebook covers the Denver relocation package, Relocation Concepts, Inc., and Martin Marietta Denver benefits information. In-depth sessions on each of these sections are held at various times each Tuesday in the Building 24 Conference

**Q** Will the Titan/Centaur be a stand-alone program or merged in with Titan IV? Will Atlas/Centaur remain its own entity?

**A** Our current plans are to merge the Titan/Centaur program at Space Systems into our Titan IV program in Denver. The Titan IV/Centaur will then be like the Atlas/Centaur with the program aligned for

Continued on page 3

Continued on page 3

# Relocation Center Provides Helpful Information

In the University Towne Center area of San Diego, a Colorado company has set up shop to help Space Systems employees sort out their relocation options. Relocation Concepts, Inc., an Aurora, Colorado-based business, has been here for a few weeks.

"Basically, we provide information on new and resale homes and other housing alternatives," Steve Page, one of the counselors at the center, said. "We're here to educate and provide counseling on what options people have both here in San Diego and in Denver."

One of the benefits of this center, Steve pointed out, is that three lenders are available with packages for loans so that employees can not only pre-qualify, but be pre-approved for a home loan before going on a house-hunting trip.

The Relocation Concepts center is available to all Space Systems employees. "We welcome anyone to come in," Steve says, "even those who may not have offers yet or haven't made decisions on whether to accept or reject the offers they have to move to Denver. There are no restrictions on our services."

The center also serves as a place where employees can go to talk about their personal situations.

"We provide advice on the different housing options available," Steve said. "If an employee is not sure whether to buy or rent in Denver, we

discuss the pros and cons of each with them. We think that it's best when people are given an opportunity to talk about what concerns them."

Relocation Concepts cannot, however, provide advice on Martin Marietta relocation policies (See SDR-34). If you have questions on these, you need to call your Human Resources representative, or talk to your supervisor.

## The "Kids' Room"

Children are welcome to visit Relocation Concepts with their parents. In fact, they'll be right at home in the "Kids' Room," a special area designed to entertain children of all ages while their parents conduct relocation business.

The Kids' Room is cheery with banners, t-shirts, hats and posters of the different Colorado sports teams decorating the walls. The room holds many treasures, including puzzles, books, videos, games and a few toys, such as small plastic moving vans. Children can watch movies on Colorado or read books on moving.

"We think it's important that people get their children involved in the move as early as possible," Relocation Concepts President Cynthia Carian said. "Then the children won't be as frightened of leaving California. The Kids' Room is set up to introduce children to the many wonderful things Colorado has to offer."

## Seminars for All

Employees are welcome to attend seminars at the center on subjects such as Denver real estate, mortgage options, choosing schools for your children, tax implications of buying or selling a home, and coping with relocation stress.

To find out more about these seminars, employees just need to call Relocation Concepts. Reservations are not required, and for your convenience, the seminars are held throughout the day and evening.

Relocation Concepts, Inc. is open from 7:30 a.m. to 7:30 p.m. Monday through Friday, 10 a.m. to 5 p.m. on Saturdays, and 1 to 5 p.m. on Sundays. If you need to set up a special time, counselors are willing to spend as much one-on-one time with you as you need. Call for an appointment.

For more information, contact the center at 450-1911. The Relocation Concepts San Diego center is located at 4520 Executive Drive, Suite 240. The center will remain in San Diego until all of the consolidation moves are completed. •

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*Below. Anne Henning (left) is moving to Denver with her husband Tom and their two children. She uses the center to checkout items of interest for her girls, ages 4 and 1 and a half. Here, Relocation Concepts President Cythnia Carian shows Anne some of the books the kids might like to see.*

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*Below. The Relocation Concepts Counseling Center in San Diego has lots of resources available for employees to find out more about the Denver area.*



## Q&A

Continued from page 1

total vehicle integration. The Centaur will then be managed synergistically, by both programs, as it is now within Space Systems.

**Q** A key concern of employees being offered transfers to Denver is the stability of Astronautics' programs. Could you please comment on the diversity of current contracts and their expected duration?

**A** Martin Marietta Space Group is an industry leader in domestic and international space programs. The combined strengths of Martin Marietta, GE Astro Space and GD Space Systems places the group in a powerful position within the industry. Together, the group is uniquely qualified to offer a full range of launch vehicle and satellite manufacturing, operations, and services to a very broad base of commercial and military customers.

During the course of the transition, we've made a concerted effort to educate both sides of the acquisition on our businesses. The annual report, *Better Together*, *Astronautics News* and Insight videos are among the many sources of information that the company makes available to all employees on a continuous basis. Our commitment is to maintain and improve this

service so that you can make clear career decisions as necessary.

**Q** What is the future for those employees who do not move to Denver?

**A** We are currently looking at future employment plans (see insert). As you know, the Plant 19 and Magnetics organizations will stay in place as they currently are, with reporting responsibilities back to Denver. Non-represented employees who reject offers to move to Denver or who are not given offers will be eligible for Mission Success Completion Incentives. These incentives will be given to employees on their last day of employment if they are laid off. Employees who leave for other reasons are not eligible for these incentives.

**Q** What are the primary goals that you have for this consolidation?

**A** Our objectives for consolidating San Diego operations with Denver are to gain competitive strength and preserve the greatest number of jobs over the long term. While we intend to provide a more competitive service for our customers, we will also continue enhancing mission success. •

## Jim McNally Responds:

**Q** How do you feel the transition is going?

**A** I am pleased by the progress we have made so far in consolidating operations. The high points in the transition have been the first two launches of Atlas as a Martin Marietta vehicle and the successful Titan IV/Centaur launch the day after we closed the merger.

Transition is not an easy process. It involves a series of significant changes in our operations. You and your families also are experiencing significant changes.

You have demonstrated that the richly deserved respect you are afforded throughout the world for your professionalism and dedication to Mission Success is warranted. There are five more Atlas launches scheduled before the end of the year, including an Atlas E from Vandenberg at the end of this month, and 11 more planned for next year as we complete the consolidation effort. I am confident that those vehicles will perform their missions successfully and will provide further evidence of the Atlas team's ability to focus on its incredibly important job during a time when your lives are disrupted by change.

I renew the pledge of our senior management to do all that we can to make this transition as smooth as possible for those who are transferring from San Diego to Denver. We also are committed to providing extraordinary assistance to employees in San Diego, the Cape and Vandenberg who will not receive offers of continuing employment and those who choose not to accept offers. •

**Your San Diego and Denver HR Reps will be key in answering your relocation questions. Don't hesitate to call. If you don't know your San Diego HR Rep, call x44203.**

## Offer

Continued from page 1

Center. These sessions are your opportunity to get the facts and ask questions. If answers are not available immediately, the questions are gathered and answered in a Human Resources Q&A available on QuickMail public folder and Macintosh public folder (KM24/1 HR: Transfer Offer Information). The seminar schedule is also available in this public folder.

Once you receive an offer, you have two weeks to respond by signing the offer paper and returning it to your supervisor.

Remember: Missing the two-week deadline is considered a reject. Make arrangements with your supervisor if you need extra decision-making time. If you have questions concerning anything in the offer letter, you will be asked to write down your concerns for reply. Any changes to your report date are needed, in writing, from your supervisor.

If you decide to reject your offer, return your offer letter along with a written explanation of the reasons behind your decision to your supervisor.

If you accept and return your offer letter, a San Diego Human Resources representative will contact you to begin the paperwork needed for the next step – a house-hunting trip to Denver. •



# TRANSITION TOPICS

## Personnel Selection and Transfer

**Offer Process** – As tasks are scheduled for transition, your management team will identify specific skills, job classifications, and numbers of people needed in Denver to supplement and complement the existing Denver work force.

Within each discipline, program, and functional organization, a specific number of individuals will be selected to receive transfer offers. These offers will be made over the next 18 months. Individuals who receive formal offers will be informed of salary, title, job assignment, organizational reporting, expected transfer date, and relocation benefits. (See "The Offer Process," page 1.)

Rejection of a transfer offer will not affect your ability to remain employed as long as your work activity remains in San Diego; nor will your decision impact eligibility to be a full participant in any of the transition initiatives described in this issue of the *Orbiteer*.

As work is transitioned, residual tasks will remain in San Diego for some period of time. If you do not receive a transfer offer or are unable to transfer, you may be assigned an important "rear guard" task for as long as your services are required. •

**Merit Increase Plan** – A "Pay for Performance" merit plan went into effect last month. Salary increases for those exempt and salaried nonexempt employees went into effect July 16.

During this period of transition, promotional opportunities will present themselves and promotional increases will be funded as business necessity dictates. •

## News for the "Rear Guard"

**Task Completion Dates** – During the next 90 days, your supervision will notify you of your task completion date in San Diego based on a master schedule of planned work to transfer to Denver. This date will be approximate, as work transition schedules are subject to change in a complex move of this nature. This initial notification will not constitute an employment contract for the duration period. It will be simply the company's best estimate as to when or if you will be impacted by the transition. Your supervision will advise you on a regular basis of schedule changes that impact your task completion date.

The current plan for transitioning work from San Diego to Denver is shown on page 5. Future revisions will be published regularly. •

**60-Day RIF Notices** – As work transitions from San Diego to Denver, it will become necessary to lay off employees. Those affected will receive a formal 60-day reduction-in-force (RIF) notice. Each individual will be permitted up to 40 hours of Career Center services on company time. Employees on RIF status may also use their personal time, with supervisor approval, to attend the Career Center. The center will provide nationwide job search, networking, a job bank of current job openings, resume preparation, interview skill training, FAX, typing, telephone service, and seminars on entrepreneurship. •

## Mission Success Completion

**Incentives** – To assist employees financially in bridging employment from their current job to a new job, and to reward employees'

## Coming in the August 19 *Orbiteer*

A close look at Martin Marietta's comprehensive outplacement program, including a dedicated facility and staff to offer career counseling, job search assistance, and retraining.

dedication and commitment for completing their tasks in San Diego, a Mission Success Completion Incentive payment will be given to eligible employees, as identified in the letter to employees dated July 1.

**Plan Highlights** – All full-time San Diego exempt salaried and nonexempt salaried employees on the active payroll as of June 16, 1994, whose jobs will be eliminated, are eligible to participate.

- Exempt salaried award – \$8,000 payable on the last day of employment, regardless of assignment duration.
- Nonexempt salaried award – \$5,000 payable on the last day of employment regardless of assignment duration. •

## Published by Public Affairs

(619) 974-3600

Send items of interest to:  
**Orbiteer**, P.O. Box 85990  
Mail Zone 51-5502  
San Diego, CA 92186-5990

The *Orbiteer* is published biweekly for the employees of Martin Marietta Astronautics, Space Systems. Submitted articles will be printed as space permits, at the discretion of the editor. All submittals may be edited per space requirements.

**MARTIN MARIETTA**



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**ACTIVITY NAME**

**ACQUISITION**

- TITAN / CENTAUR
- PROGRAM OFFICE RELOCATED
- PROGRAM FUNCTIONS RELOCATED
- PRODUCTION

**ATLAS / CENTAUR**

- PROJECTS RELOCATED
- P&M OFC, SE&I, VEHICLE MGMT, BUS OPS RELOCATED
- PARALLEL PRODUCTION

**MISSION INTEGRATION**

- T/C MISSION INT RELOCATED
- A/C MISSION INTEG RELOCATED

**SUBASSEMBLY PRODUCTION**

**ADMIN / CORE**

**FACILITIES**

- ACTIVATION
- OFFICE SPACE AVAIL
- FINAL ASSEMBLY AND TEST
- EQUIPMENT INS TLN / CLEAN ROOMS AVAIL
- RAL MODIFICATIONS
- FIXED FOAM / PRESSURE PIT
- ENGINEERING LABS
- DEACTIVATION
- KEARNY MESA

**LAUNCH OPS CONSOLIDATION**

The chart features a grid with months (A-M-J-J-A-S-O-N-D) on the horizontal axis and years (1984-1986) on the vertical axis. Activity paths are represented by horizontal bars with labels such as 'CLOSURE', 'IELV', 'AREP', 'SLC-3', 'CLS', 'LAST KM BUILD T/C 18', 'FIRST T/C ATO FACTORY COMPLETE', 'T/C 14 ACCEPT TEST COMPLETE', 'DENVER RAL PATHFINDER START T/C 18', 'T/C 09 ACCEPT TEST COMPLETE', 'LAST KM BUILD COMPLETE', 'AC122 FIRST DENVER BUILD COMPLETE', 'DENVER START A/C 122', 'T/C ATLAS', 'DS BLACKOUT', 'ATLAS SIL MOVE START', and 'ANNOUNCEMENT'. A legend indicates that thick black lines represent the 'Critical Path'.

|               |                |
|---------------|----------------|
| Date:         | 5 August 1994  |
| Revision      | 5              |
| Status as of: | 12 August 1994 |

The *Orbiteer* is now being printed by Space Systems Copier Services. The newsletter will be gradually phased out in October of this year. After that time, a new site newsletter will be started to cover events at the Kearny Mesa facility. Plant 19 will continue to have its site newsletter, as will the other various offsites that currently have such publications.

MARTIN MARIETTA

# ORBITER

A Biweekly Newsletter for the Employees of Martin Marietta Astronautics, Space Systems

August 19, 1994

## Atlas Delivers Mission Success DIRECTV™ Payload Processed in Record Time, Placed in a "Flawless" Orbit

**A**C-107 successfully blasted into space on August 2, carrying the DIRECTV™, Inc. Direct Broadcast Satellite-2 (DBS-2) into orbit at 4:57 p.m. PDT. It was the third successful Atlas launch this year, the 515th Atlas launch overall and the 83rd flight for Centaur with Atlas.

Last February, DIRECTV™, Inc., a unit of GM Hughes Electronics, selected Atlas to launch DBS-2 when a U.S. Air Force Medium Launch Vehicle mission originally scheduled for July moved to 1995. DIRECTV's two-satellite DBS constellation will become operational this fall, delivering up to 150 channels of TV entertainment to homes possessing the Digital Satellite System (DSS™) receiving hardware.

"From the date the contract for launch services was signed with Commercial Launch Services in February 1994, the Atlas team successfully completed integration of the HS 601 spacecraft onto the Atlas IIA launch vehicle in just five months," Mike Wash, CLS president, said. "We at Martin Marietta are very proud to be part of this very important communications program for DIRECTV."

DBS-2 also carried the SpaceArc® time capsule, the world's first optical storage device.

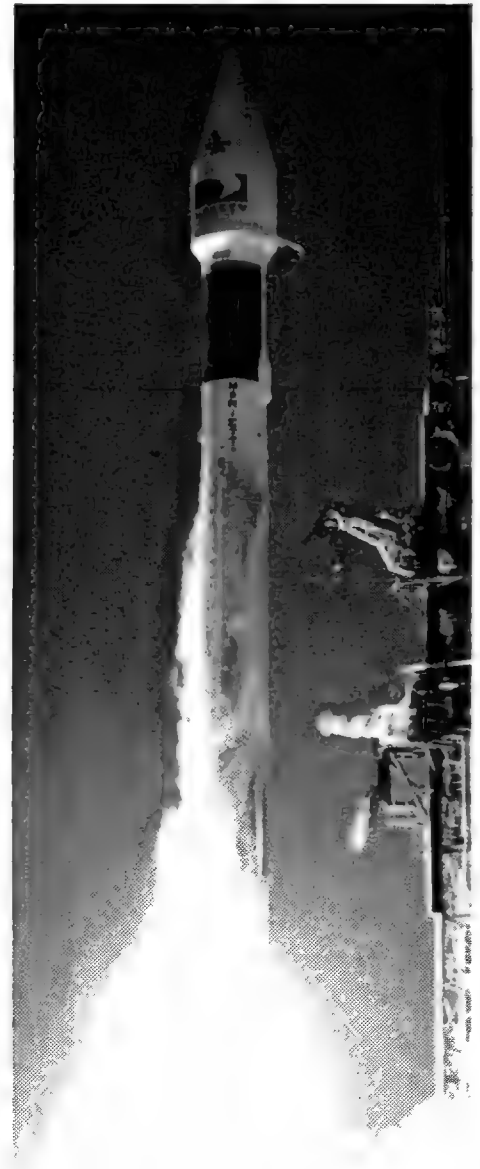
Developed as a non-profit educational project by the Rochester Museum & Science Center in Rochester, NY, SpaceArc® includes messages from 38,000 participants who have contributed their thoughts, hopes, dreams and images of our civilization for the enjoyment of future civilizations (see the August 5 issue of the *Orbiter*).

This launch was special in that it occurred soon after the nation's celebration of the 25th anniversary of Apollo 11 and man's first step on the --Moon's surface.

Rich Gibb, division vice president and site director, CCAS, said, "With this launch we reflect on the achievements of thousands of talented men and women, including those in our company who were responsible for some of the Atlas lunar mapping missions, planetary probes and manned Mercury flights, all paving the way for milestones that still stand out in the history books."

Twenty-five years ago, Atlas looked somewhat different than the Atlas of today, although structurally it is still the same welded stainless steel balloon.

"Although the vehicle looks different," Rich Gibb said, "there is no difference in our total commitment to mission success." •





## A Launch with an Eye to the Future

By Larry Foss, *The Voice of Atlas*

On August 3, AC-107 placed a very futuristic satellite into geosynchronous orbit after an unexpected one-week delay due to weather and technical disturbances. By futuristic, I mean that all of us television enthusiasts soon will have the opportunity to choose from 150 different programmed channels with the DIRECTV™ receiver gear available at our local stores. The launch was futuristic also in that a state-of-the-art time capsule named SpaceArc® (see August 5 *Orbiteer*) was a passenger aboard the Hughes-built spacecraft. But I'm calling the launch futuristic in a way that only fate could have arranged.

The delay of AC-107 placed the new launch date, August 3, right in the middle of a scheduled event that has never before been held in Central Florida: namely, the Junior Olympics. Ten thousand students with friends and family members from every state in the union witnessed, for the first time, an Atlas being launched into space. Midway through the opening ceremonies, the festivities stopped so that everyone could watch the launch live via a satellite uplink.

While this seems innocent enough at first blush, think about the possible changes in the lives of each of those high school students. The Atlas launch vehicle; Martin Marietta Astronautics; and aerospace as a profession became a reality to each of those in the Brevard Community College stadium. The launch of AC-107 may have decided the careers of many of those Junior Olympians in attendance. Who knows, because of this experience, some may even become aerospace engineers at Martin Marietta, working on the Atlas launch vehicle. •

## And a Launch with Ties to the Past

The 516th Atlas to be launched later this month will be an early present for Vandenberg Air Force Base, which will be celebrating the 35th anniversary of the first Atlas launch on Saturday, September 10.

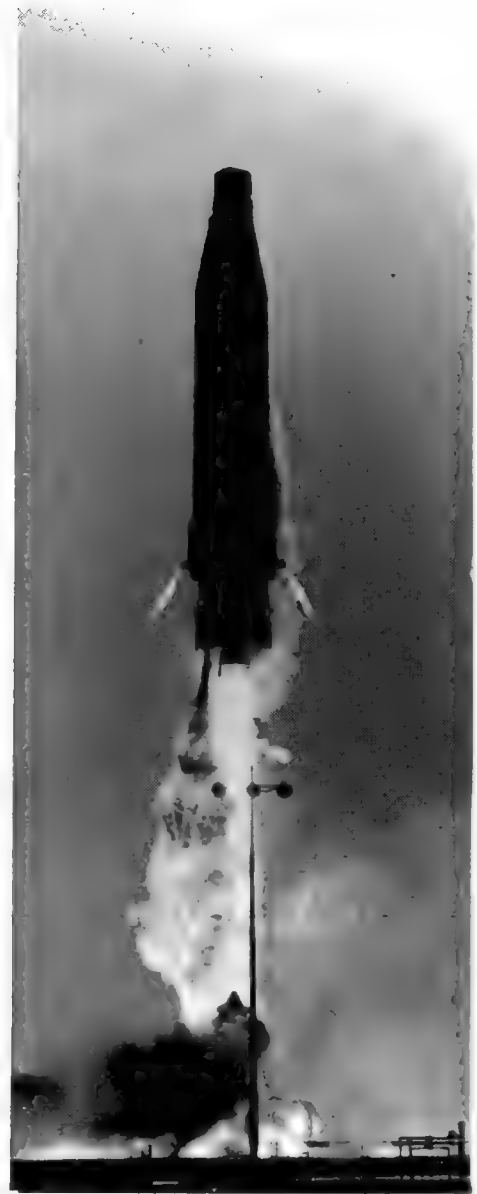
Back in 1959, 12D was not the first Atlas ever launched. In fact, it was the 31st Atlas to go up as part of the then-new program.

12D flew as a test mission for the Strategic Air Command. But with its success, Atlas became operational as an ICBM and we began a long and lasting relationship with VAFB.

The Atlas E boosters launched from VAFB are modified intercontinental ballistic missiles originally developed and built for the U.S. Air Force. Atlas became operational as an ICBM at Vandenberg just two years after its first successful test flight from Cape Canaveral in December 1957.

Atlas development began under Air Force funding in 1945 and continued throughout the late 1940s and early 1950s with company funding. By 1954 the ICBM was assigned top Air Force priority. General Dynamics had the basic Atlas design ready for production, introducing many innovations in rocketry such as the use of a pressure-stabilized tank to minimize weight, gimbaling engines for flight control, on-board inertial avionics, and propulsion based on a unique one-and-one-half staging system. Production began in 1955.

The modification program at VAFB began in 1965 after Atlas was decommissioned as a weapon system. Atlas ICBMs had been deployed at bases throughout the U.S. during the early sixties. Rather than scrap the missiles, the Air Force put 141 of them into storage at Norton AFB in CA, and General Dynamics was awarded a contract to begin refurbishing 95 of them to be used as space launch vehicles. •



*The launch of Atlas 20E will be August 29, and the 15-minute window opens at 10:58 a.m. Thirty-five years earlier, Atlas 12D (above) lifted off.*

**The Air Force is celebrating Atlas' anniversary on September 9 and 10 with a reunion at VAFB. Events include a luncheon, tours, guest speakers, displays, and an Atlas Reunion Dinner. For more information, call Nancy Mumford, (619) 974-3603 or Debbie Ware at (805) 734-8232, x66292.**

# Command Media

Reprinted, in part, from Astro Space News, East Windsor, NJ

## What Are Command Media?

Command media documents describe the way Martin Marietta conducts business. There are three basic types of documents: policies, procedures and practices. Each type establishes the minimum requirements for the execution of various tasks or for compliance with operating unit standards and is subject to customer review and/or audit. Command media cover the gamut from ethical behavior to review of proposals, to requesting facilities services, to proper handling of devices susceptible to damage from electrostatic discharge. Command media are based on business demands and numerous other requirements, including those of the corporation, the Space Group, the customer and federal, state, and local governments. Each layer of command media further defines a particular subject, and all of the levels have several things in common:

1. They all are formally controlled and released.
2. They all are subject to government customer, corporate, group and internal audit.
3. They are the source documents for a number of non-command media items, such as desktop instructions, manufacturing process plans, user guides and training manuals, which address at a detail level the day-to-day operations of the operating unit. These documents may not violate policy and/or procedure requirements, although they are not part of the formal command media system.

The plan to merge San Diego procedures with Denver's command media is currently being studied. News on this aspect of the consolidation will be published as it becomes available. •

## TRANSITION TOPICS

### San Diego Career Center to Open

Monday, August 29, Martin Marietta will officially open the doors of its new San Diego Career Center. The center will be a service operation, in place to help San Diego Martin Marietta Space Systems employees, who have been issued a Reduction-In-Force (RIF) notice, evaluate their career options, choose an appropriate career goal and then develop a plan to achieve that goal.

The center will offer job search assistance, guidance, counseling, and support information as well as the following services:

- Job search skills training
- One-on-one consultants
- Resume and cover letter/envelope typing
- Mailing – stamp and mail materials related to job search
- Telephone/message service
- Fax machine
- Resource library
- Video interview practice
- Job lead development
- IBM/Macintosh computers
- Typewriters
- Retraining assessment guidance

The staff will include professional consultants, including consultants from Drake Beam Morin, (DBM) Inc. and Armour Consulting Group Inc. (ACG) as well as administrative personnel who are genuinely concerned about the well-being and future success of each client.

DBM, which currently assists Martin Marietta Career Center activities in Denver, is the world's leading provider of career transition

counseling and is responsible for teaching the job search tools and techniques that have become industry standards. While no one can predict exactly how long it will take to find a new job, research clearly proves that people who use the services provided by DBM *find better jobs faster!*

ACG's job lead development team is dedicated to providing career opportunities on an ongoing basis tailored to our clients' job search parameters. Assistance in retraining assessment and guidance for individuals interested in augmenting their current skills or seeking a career change are also available.

The center will be open from 8:00 a.m. to 4:00 p.m. every business day and is located at 8845 University Center Lane off of I-5 North and Nobel Rd., on the fourth floor of the IBM building.

For more information concerning the Career Center, contact Becky McDonald at (619) 974-4135 or Mel Knoepp at (619) 597-4705. •

### Relocation Charge Numbers

The following charge numbers are to be used for labor charged to Denver relocation. Employees should not charge personal time to these activities. Call the Labor Help Line, x41444, if you need more information.

| Relocation Activity       | Labor Charge # |
|---------------------------|----------------|
| House Hunting Trip        | 0511000-015    |
| House Closing Trip        | 0511000-016    |
| Relocation to Denver Trip | 0511000-021    |

# Space Briefs

**Next Titan IV/Centaur Launch** – The next scheduled Titan IV/Centaur launch date is now declassified. Current plans are to launch the vehicle on August 25. The launch time and window remain classified secret, however, the launch period of 2:15 - 5:30 a.m. EDT is unclassified, according to the Department of the Air Force. •

**Building 24 Reception Area to Close** – Effective August 31, the receptionist's desk in the lobby of Kearny Mesa building 24 will close. However, the lobby itself will remain open for employees to use.

All visitors to the division – except foreign visitors and those visitors who will be attending classified meetings – will be badged by the Plant Protection Officer on duty. Employees hosting a classified meeting or a visit by a foreigner must submit a completed MMC-San Diego Classified Meeting Roster or a Foreign Visitors Facility Access Request. These forms may be obtained from the Visitor Control Office in Industrial Security.

"No Escort" badges will be issued by the Plant Protection Officers provided the visitor's name is on the No Escort Badge Listing. Requests for "No Escort" blue badges must be requested via a "4011-Facility Access Request," which should be turned in to the Industrial Security Visitor Control office.

All picture badges are to be picked up from the Identification Office between 6:00 and 10:00 a.m.

Please remember that all visits by foreign nationals must be cleared by Industrial Security at least one week in advance of the proposed visit.

Visitors to Commercial Launch Services will also be badged by the Plant Protection Officers. •

**NASA Info Now on the Internet** – NASA's Remote Sensing Public Access Center is scheduled to go online next March connecting Internet users with a computerized storage facility in Fairmont, WV. According to *Space Fax Daily* (August 14, 1994), the focus will be on earth and space science. The data

base will initially store 20 gigabits of words and images, and the sophisticated guides will assess a user's computer skills before dispensing appropriate directions. For information on this new information service, call Pam Bacon, 202-358-1538. •

**International Literacy Day** – The San Diego Council on Literacy invites you and your family to attend the Family Reading Festival, from noon to 4:00 p.m., September 10, in Balboa Park (corner of Park Blvd. and Presidents Way). Enjoy a day of fun that includes puppet shows, local authors, a book mobile, arts and crafts, book making, a scavenger hunt for prizes, and more. For more information, call 232-9921. •

**People in the News** – Employee Joe Brunetto's daughter, Virginia, is off to a good start in life – she has graduated from Point Loma High School as Valedictorian and she was awarded a 1994 NMA Space Systems Chapter scholar-

ship. In addition, she received a one-month study scholarship in Italy as well as scholarships from the PTA and the Italian Catholic Federation. Virginia will be attending UCSD this fall, and her proud parents want to thank the division for honoring her. •

## Classifieds

**MOVING SALE** – Saturday, August 27, 7:30 a.m. - 2 p.m., Mira Mesa, 10245 Kamwood Ct. Cool stuff, good prices: clothing, furniture, household items. We're selling it all and moving to Denver!

**Trying to sell your home?  
Looking for a roommate?  
Planning a moving sale?  
Send your ads to the Orbiteer!**

All ads must include your name, mail zone, work extension, and home phone number. Only home phone numbers will be printed in the ad. Exceptions: Ridesharing and lost/found item information.

**Send ads to: Orbiteer Editor,  
Mail Zone 51-5502**

Classified ad information appearing in the *Orbiteer* comes from many sources. The *Orbiteer* and the Martin Marietta Corporation do not assume responsibility for or warrant the accuracy or completeness of statements appearing in these advertisements.

### Published by Public Affairs

**Deanna Wheaton-Titzler, Editor  
(619) 974-1406**

**Send items of interest to:  
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Mail Zone 51-5502  
San Diego, CA 92186-5990**

The *Orbiteer* is published biweekly for the employees of Martin Marietta Astronautics, Space Systems. Submitted articles will be printed as space permits, at the discretion of the editor. All submittals may be edited per space requirements.

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(205) 922-3323

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(407) 783-1236

VAFB Reporter: Barbara Klinedinst  
(805) 734-8232 Ext. 67547

**MARTIN MARIETTA**

## Employment Figures

**(Week Ending August 5, 1994)**

|                                  |       |
|----------------------------------|-------|
| Cape Canaveral Air Station ..... | 502   |
| Commercial Launch Services ..... | 34    |
| GD Space Services .....          | 41    |
| Hammond .....                    | 28    |
| Harlingen .....                  | 220   |
| Huntsville .....                 | 22    |
| San Diego .....                  | 2,017 |
| Vandenberg AFB .....             | 176   |

**TOTAL..... 3,040**



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## ORBITER

A Biweekly Newsletter for the Employees of Martin Marietta Astronautics, Space Systems

September 2, 1994

## Lockheed, Martin Marietta To Merge

**L**ockheed Corporation and Martin Marietta Corporation jointly announced on August 30 that their respective boards of directors have unanimously approved a definitive agreement to merge the two corporations through an exchange of common stock valued in excess of \$10 billion.

The new corporation, Lockheed Martin, will be a highly diversified \$23 billion advanced technology company, with core businesses in defense, commercial, civil government, energy and international markets, and will employ approximately 170,000 people.

Under the terms of the merger agreement, Lockheed shareholders will receive 1.63 shares of Lockheed Martin stock for each Lockheed share. Martin Marietta shareholders will receive stock in the new corporation on a one-for-one basis. It also is intended that the new corporation would have an annual dividend rate of \$1.40 per share, which is consistent with Lockheed's current dividend.

Daniel M. Tellep, currently chairman and chief executive officer at Lockheed, will hold the same positions in the new corporation. Norman R.

*Continued on Page 3*

## Three in a Row for Titan IV/ Centaur

**A** Martin Marietta Titan IV/Centaur booster carrying a classified Department of Defense payload roared into space at 4:57 a.m. EDT, Saturday, August 27, from Launch Complex 41 at Cape Canaveral Air Station, Florida.

This was the third Titan launch for the year and the third flight of Centaur with Titan IV. On February 7 Titan IV/Centaur carried the first Milstar satellite into geosynchronous orbit 22,300 miles above Earth. The second was the May 3 launch of a classified Department of Defense payload. A fourth Titan IV/Centaur launch is scheduled for before the end of the third quarter 1994.

The Titan IV/Centaur, designated K-9, was originally scheduled to launch early August 25. According to an Air Force press release, the launch was postponed due to poor weather conditions at approximately T-3 minutes and 14 seconds when thick clouds with the potential for triggered lightning drifted into the area.

The Titan IV/Centaur provides the Air Force with a launch capability for shuttle-sized payloads, virtually duplicating the shuttle's cargo capacity of 10,000 pounds. Centaur for the Titan IV burns three times, depositing its large payload into a final geosyn-

*Continued on Page 2*

## Atlas E Successfully Orbits DMSP-12 Satellite

**A** U.S. Air Force/Martin Marietta launch team successfully launched an Atlas E booster from Space Launch Complex 3W at Vandenberg AFB, California, on August 29. It was the 24th consecutive success for Atlas E and the 279th Atlas launch overall from VAFB.

The Atlas booster, designated 20E, carried a Defense Meteorological Satellite Program (DMSP-12) satellite built by Martin Marietta Astro Space into polar orbit 525 miles above the Earth. DMSP-12 will provide continuous data on clouds worldwide in both visible light and infrared and specialized meteorological, oceanographic, and solar-geophysical information. In addition to serving a broad spectrum of Air Force and other military users, DMSP satellites provide extensive data to the civilian weather forecasting centers of the National Oceanic and Atmospheric Administration (NOAA). Atlas E has successfully launched seven DMSP Block 5D-2 program spacecraft from Vandenberg starting with DMSP-6 in December 1982.

Atlas E is a modified intercontinental ballistic missile, refurbished for space launch missions at Vandenberg. Atlas 20E was originally built and delivered to the Air Force in January 1961, decommissioned in 1964 and stored at Norton AFB until 1981. In

*Continued on Page 2*



## TRANSITION TOPICS

Friends and Co-workers:

As some of you may know, I will be leaving soon to start working in Denver. Sadly, this is my last *Orbiteer*. I wanted to take some space in this issue to thank every one of you for your support over the last few years in making my time as editor of this newsletter worthwhile. Without your inputs and comments, our newsletter would never have reflected the spirit of Space Systems.

Please, don't let this spirit end. My new position in Denver will be as the editor of the Astronautics employee newsletter, *Astronautics News*. I would love to hear from you and get the latest news to include in that newsletter.

At this time, I want to recognize some special people who have really helped with the *Orbiteer* over the last several years:

- Nancy Durham-Mumford, who actually has been doing the newsletter as a ghost writer for the last several weeks, and who's great with advice.

- Becky McDonald, who always kept me informed of the latest in the Human Resources realm, and has also checked names and job titles (always on deadline!). She's a great friend to have, and I only hope I can find someone as reliable in Denver.

- The *Orbiteer* reviewers: Herman Porter, the Industrial Security department, and Dan Little. Thank you for your extra time in making sure that each issue has been accurate and informative.

- My two special proofreaders: Terry Banderas and Steve Gallup. Terry, thanks for the layout advice, and only you, Steve, can come up with such great captions!

- My various friends in the Business Communications and Still Photography groups, who were always there to provide last-minute art, photos and advice. Special thanks to Marian Fite for her extra

efforts in getting the newsletter ready for print.

- The Copier Services personnel for printing the *Orbiteer* these last several issues. It looks great!

- Mike, Steve and John in the Mail Room, and especially Dorothy Hobson for her extra support in getting the newsletter distributed every other week. Thanks, guys, for letting me be a "special" member of your group.

- My various supervisors through the years who always seemed to back up my every decision with this newsletter: Alda Jorgenson, Terry Banderas, Julie Andrews, and Dr. Roberta Baade.

- And to Mr. Mike Wynne, our general manager, who actually came up with many of the article ideas you all have seen over the years. Mr. Wynne is an advocate of employee communications and has always strongly backed the publication of an employee newsletter, through all of the budget cutbacks and division changes. He's also the quickest reviewer I have, always beating my deadlines by hours!

- Special thanks, too, to Doris Raaberg for helping me through the years.

My hope is that even as the *Orbiteer* is phased out over the next month, that employee communications will not end at Space Systems. Please make this hope a reality. Feel free to call me in Denver with your article ideas and photos for the *Astronautics News*. Starting September 19, I can be reached at (303) 977-6911 or you can write to me at Martin Marietta Astronautics, Public Affairs, 12999 Deer Creek Canyon Road, MS DC-1020, Littleton, CO 80217.

My best wishes to you all.

*Deanna Wheaton-Titzler*  
Deanna Wheaton-Titzler

## Titan

Continued from page 1

chronous orbit. (Centaur for Atlas burns twice, placing the payload in geosynchronous transfer orbit, requiring the payload to employ a series of burns to reach its final geosynchronous orbit.) Because the payload is classified, the time of spacecraft separation and the length of the Centaur mission is also considered classified.

This was the tenth Titan IV launched, the sixth from CCAS, and the second from Launch Complex 41 in less than four months. Four Titan IVs have been launched from Vandenberg Air Force Base. •

## Atlas E

Continued from page 1

1982, it was delivered to Vandenberg for modification. Two Atlas Es remain in the Air Force inventory for space launches. •

## SLC 3-E Update

Under contract to the U.S. Air Force, Martin Marietta is refurbishing Space Launch Complex 3 East (SLC-3E) to accommodate the Atlas/Centaur vehicles at Vandenberg.

SLC-3E will be ready for booster on stand in July 1996. SLC-3E will launch its first Atlas/Centaur in 1997.

Foundation Construction is proceeding well with five out of six large "pours" of concrete complete. Steel construction will begin next month. •

**Ethics Hotlines: To report possible wrongdoing or to obtain clarification on ethical matters, please contact the Space Systems Ethics Hotline at (619) 542-3200, the Corporate Ethics Hotline at (407) 356-9400 or 1-800-3-ETHICS (338-4427), or the Denver Ethics Office at (303) 977-4530.**

# Service Anniversaries

## June and July 1994

### 40 Years

Dorothy Baker  
Raymond Clement

### 35 Years

John Coulson, Jr.  
Jack Halfpenny

### 30 Years

James Muir  
Jerral Staples  
John Wohlwend

### 25 Years

Kenneth Allen  
John Boerlin  
Ron Stoneburner  
Don Sudweeks

### 20 Years

Bill Bowersox  
Bruce Nixon

### 15 Years

Kanhaiya Agarwal  
Ronald Bibb  
Janet Biccum  
Douglas Birse  
Jean Burdick  
John Earley  
Gregory Gauer  
John Grier  
Anita Heckathorn  
Edward Kelly  
Maureen Lethbridge  
Gladys Ovalle  
Scott Peck  
Kathleen Poindexter  
Mark Sedillo  
Tommy Smith  
Marva Winters  
Phillip Yee

### 10 Years

Dana Batchelor  
Norman Bobczynski  
Michael Busley  
John Duffey, Jr.  
Steven Durham  
Michael Edberg  
Gregory Farmer  
Rickie Friend  
Charles Gilliland  
George Guest  
Eric Hogan  
Jerry Hopkins  
Sheila Jones  
Ernest Knapp  
Troy Kuenne  
Lewis Liggins, III  
Gary McAnally

### 10 Years (Continued)

Timothy McDerby  
Alonzo Mejia  
Rosa Nye  
Rick Pepin  
Howard Phillips  
Robert Powers  
Ruben Rodriguez  
Steven Rower  
Cleatis Schrank  
Wendy Tse  
Jeffrey Valley

### 5 Years

Vezira Asimovic  
John Avitt  
David Ball  
Howard Bass  
Kenneth Behl, Jr.  
John Cantrell  
David Carter  
Raul Cervantes  
Terri Charles  
Lori Cox  
Deborah Crist  
Deborah Cross  
Daniel Culbreth  
Guillermo De Luna  
Thomas Dresser  
Kenneth Dugan  
Peter Ejarque  
Andrew Farrell, III  
Sheryl Fehr  
Shawn Fezzey  
James Filar  
David Flatt  
Kia Freeman  
Patrick Fridrich

### 5 Years (Continued)

Patrick Fuge  
Gary Gallenberger  
Anthony Gepner  
Steven Glover  
David Gomez  
Albert Goodearly  
Rodney Graham  
William Gray  
Jeffrey Grillo  
David Hamilton  
Thomas Hardy  
Jesse Herron  
Thomas Hogan  
George Hopper, Jr.  
Dave Hoth  
Karl Hoyle  
Robert Jensen  
John Jones  
Dean Jorde  
William Kaufman, Jr.  
Merle Kemble  
Nobil Kirma  
Kevin Knoll  
Barbara Kontogiannis  
Bret Kudlicki  
Walter Liecker  
Laurie Liuag  
Leonardo Maestro  
John Magisano  
Carolyn Margoni  
Leopoldino Masiero  
Cynthia McCarthy  
Michael McKendry  
Barrie Mead  
Laura Michell  
Hermelinda Morales

### 5 Years (Continued)

Mark Nielsen  
Vanessa Nunn  
Gary Olson  
Scott Owen  
Melissa Palco  
Thomas Perez  
Kenneth Pfeifer  
Greg Pingatore  
David Poggi  
Bryan Post  
Jason Robinson  
Ronald Ross  
Norman Rutherford  
Jeffrey Sakai  
Michael Schmall  
Carol Schmid  
Richard Sides  
Wayne Simpkins  
David Smith  
C. Sprangers  
Joseph Spransy  
George Stetz  
Charles Stevens  
Merri Ann Stowe  
Jeffrey Strom  
George Thomas  
Charles Torrez  
Franklin Tyler  
Brian Votaw  
Mark Wheelus  
Steven Williamson  
George Wilson  
Reid Windle  
Christine Witmer  
Floyd Woosley

## Lockheed Martin

*Continued from page 1*

Augustine, Martin Marietta's chairman and chief executive officer, will be the president of the new corporation and will become its chairman and chief executive officer when Tellep retires.

Lockheed Martin will be headquartered in Bethesda, Maryland. It will be organized around four major business sectors: Space and Missiles, Aeronautics, Electronics, and Information and Technology Services. The company will also have Energy and Materials subsidiaries. Organizational and operating details of the new corporation will be announced following Hart-Scott-Rodino review and approval by Lockheed and Martin Marietta shareholders. The merger is expected to close early in 1995.

Lockheed, headquartered in Calabasas, California, had 1993 sales of \$13.2 billion and a total backlog of \$28.9 billion. The Corporation has 77,500 employees. Martin Marietta has approximately 93,000 employees. •

# Space Briefs

**Intelsat Turns 30** – Intelsat, the international satellite consortium, celebrated its 30th anniversary on August 20. In 1964, 11 nations combined to provide access to international satellites. Today, Intelsat has 134 members and a global 22-satellite system.

A Martin Marietta Atlas IIAS will launch Intelsat's next satellite – 703 – on September 29, from Pad B at Cape Canaveral Air Station.

## CRA Announces Fund-Raising Drive

– Traditionally, CRA has received its funding from the many vending machines in all of the San Diego locations. Consolidation and relocation has cut into CRA's revenue to the point that the employee-owned facility will face serious financial jeopardy by the end of the year. According to a memo issued by a group called the CRA Recovery Team, General Dynamics will continue to operate the facility "as long as it does not accrue any liability for the corporation or require corporation funding, or until it [GD] has another need for the property."

CRA has taken many actions to reduce the deficit including staff cuts, renting the club out to other companies and selling HFC memberships to the public. Most recently, CRA has launched a fund-raising drive. Supporters are asked to donate at various levels – from \$10 to \$500 and up. Benefactors contributing \$50 or more will receive thank-you gifts, and all contributors will have their names listed on a plaque to be displayed in the park.

For information, call Dexter Levy of the CRA Recovery Team at x39920.

## TDC Schedule Change

– Beginning today, September 2, Labor Accounting is changing its TDC pick-up schedule from 4:00 and 5:00 p.m. to 3:00 and 4:00 p.m. The Time Audit office is closing one hour earlier at 4:30 p.m. If you have any questions, please call Time Audit at x41442. The Time Audit Audix number is x41482.

## Martin Marietta Career Center Opens

– On Monday, August 29, the Martin Marietta Career Center opened the doors

of its new facility. The center will assist employees who have received a reduction-in-force to define and achieve their employment goals.

The address is 8845 University Center Lane, Suite 440, San Diego, 92122. Hours are 8:00 a.m. - 4:00 p.m. Monday-Friday. For more information, call your Martin Marietta Human Resources Rep.

## Moving Companies Offers Discounts

Employees who are moving themselves from their present state to another state may take advantage of the discount offered by moving companies to Space Systems. This offer also applies to retirees or to those seeking employment opportunities elsewhere.

We, as a company, are not endorsing either mover, but are passing along information that may assist you in your moving plans.

Call the following agents for further information: San Diego Mayflower, Bob Coles (619) 578-2000; Republic North American, John Stephan (619) 452-1530.

## Published by Public Affairs

**Deanna Wheaton-Titzler, Editor**  
(619) 974-1406

**Send items of interest to:**  
**Orbiteer, P.O. Box 85990**  
**Mail Zone 51-5502**  
**San Diego, CA 92186-5990**

The *Orbiteer* is published biweekly for the employees of Martin Marietta Astronautics, Space Systems. Submitted articles will be printed as space permits, at the discretion of the editor. All submittals may be edited per space requirements.

CCAS Reporter: Janet Goforth  
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Hammond Reporter: Jan Pershal  
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Harlingen Reporter: Noelia Gutierrez  
(210) 430-7835

Huntsville Reporter: Don Deming  
(205) 922-3323

Space Services Reporter: Dave Bennett  
(407) 783-1236

VAFB Reporter: Barbara Klinedinst  
(805) 734-8232 Ext. 67547

**MARTIN MARIETTA**

# August Retirees

## Ernest J. Gravelle

Engineering Specialist ..... 35

## William E. O'Rourke

Mgr., Material Operations .... 36

## Duane Quinn

Sr. Project Engineer ..... 35

## Donald D. Duley

Launch Service Tech., Sr. .... 20

# Classifieds

**For Sale** – F/F Refrigerator, \$50; Corvette car cover, \$20 OBO; Desk. \$15; Commodore 128 computer w/monitor, Epson dot matrix printer, external disk drive + misc. software, \$30; all items good condition. Deanna, 549-3956.

**Trying to sell your home?**  
**Looking for a roommate?**  
**Planning a moving sale?**  
**Send your ads to the *Orbiteer*!**

All ads must include your name, mail zone, work extension, and home phone number. Only home phone numbers will be printed in the ad. Exceptions: Ridesharing and lost/found item information.

**Send ads to: *Orbiteer* Editor,**  
**Mail Zone 51-5502**

Classified ad information appearing in the *Orbiteer* comes from many sources. The *Orbiteer* and the Martin Marietta Corporation do not assume responsibility for or warrant the accuracy or completeness of statements appearing in these advertisements.

# Employment Figures

## (Week Ending August 5, 1994)

Cape Canaveral Air Station ..... 500  
Commercial Launch Services ..... 34  
GD Space Services ..... 42  
Hammond ..... 25  
Harlingen ..... 221  
Huntsville ..... 22  
San Diego ..... 1986  
Vandenberg AFB ..... 174

**TOTAL..... 3,004**



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# ORBITER

A Biweekly Newsletter for the Employees of Martin Marietta Astronautics, Space Systems

September 30, 1994

## San Diego Career Center Open and Ready to Go

With the increasing number of San Diego employees receiving reduction-in-force notices over the next several months, Martin Marietta has opened a state-of-the-art Career Center that offers training and resources for making job searches easier.

Staffed by members of Drake, Beam, Morin, as well as by Space Systems employees, the Center is open from 8 a.m. - 4 p.m., Monday through Friday, to serve the needs of laid off workers. More than 30 work stations have been set up in the facility, as well as Mac and IBM computers, tele-

phones, copiers and fax machines for use by those with access to the Center.

To get into the Center, employees must present their reduction-in-force notice the first time they visit. After signing in, the Center is theirs to use for working on resumes, calling potential employers, or talking with counselors about their searches.

The Center also has a job lead development coordinator, Kimberly Armour of the Armour Consulting Group. Kimberly's job is to find open requirements from companies and organizations locally, nationally and internationally.

"The jobs I find are real ones that need to be applied for immediately," Kimberly explains. She also conducts a job lead briefing every Tuesday and Thursday so laid off employees can get up-to-date information on the most recent job leads she has found (see list on page 2 for briefing schedules).

Howard Roe and staff members of the Career Center are currently working with the Private Industry Council on a grant proposal to obtain retraining funds for displaced San Diego Martin Marietta employees.

For further information on the services the Career Center is offering employees affected by the on-going reductions-in-force, please call the center at 694-9000. •



The Career Center staff are ready to help laid off employees with their job searches. Front row: Evangel Cremascoli, Gail Gatzke, Howard Roe. Back, left to right: Lillian Soto, Carla Plybon, Becky McDonald, Bernie Kulchin, Kimberly Armour, Willa Reynolds, Danielle Moser, and John Gleason. (Not pictured: Alice Rosano, Nancy Smith and Jay Paulus.)



HR Representative Becky McDonald (center) introduces employee Ken Blum (right) to Career Center Manager Howard Roe.



## JOB LEAD BRIEFINGS

(no reservations required)

**Tuesday 8:30 - 9 a.m.**

### **Engineering Disciplines \***

- Electrical Engineering
- Mechanical Engineering
- System Engineering & Analysis
- Test Engineering Project Engineering
- Design Engineering

*\* Anyone supporting or functioning in an engineering capacity with or without a science-oriented degree will probably want to attend this briefing.*

**Tuesday 9 - 9:30 a.m.**

### **Manufacturing Operations & Support**

- Manufacturing
- Industrial Engineering
- Production
- Warehousing
- Inventory Management
- Logistics
- Manufacturing Planning
- Scheduling
- Expediting

**Thursday 8:30 - 9 a.m.**

### **Business Operations**

- Administrative
- Configuration & Data Management
- Procurement
- Planning
- Marketing/Business Development
- Finance/Accounting
- Human Resources/ Training/ Organizational Development/ Security

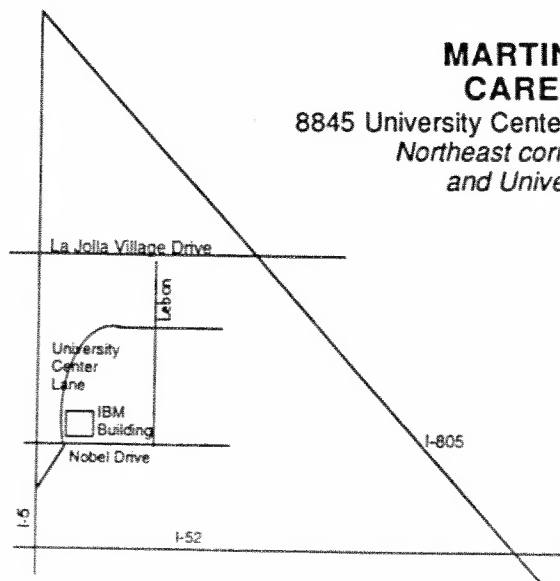
**Thursday 9 - 9:30 a.m.**

### **Business Operations**

- Software Engineering
- Information Systems
- Programming/Analysis
- Systems Administration
- PC Support
- Communications

Quality Assurance pertaining to a specific discipline listed will be covered in that specified briefing.

If your discipline isn't listed or if you have questions, please contact the Career Center at 694-9000. •



### **MARTIN MARIETTA CAREER CENTER**

8845 University Center Lane, Suite 420  
Northeast corner of Nobel Drive  
and University Center Lane

## Transition Takes Off, San Diego Reductions Begin

As quickly as you could say "liftoff," it seemed that the Atlas Reliability Enhancement Program (AREP) and the Intermediate Expendable Launch Vehicle (IELV) program were no longer based in San Diego. These programs were the first to move from San Diego to Denver when the transition aspect of the Space Systems consolidation plan began in July.

Following close behind, the Titan/Centaur program office and the "advance guard," employees from many different functions, moved and established themselves in Denver. To date, approximately 800 offers have been extended. In addition, the personnel requirements have been established for the balance of Kearny Mesa building 5's operation until Atlas and Centaur final assembly move to Denver, as well as for the Magnetics business area and for Plant 19.

The San Diego work force will be reduced as work moves to Denver. Space Systems' past policies on reduction-in-force will continue with comprehensive outplacement services offered through a new Career Center that is now open (see related articles). Employees who receive RIF notices will be eligible for the Mission Success Completion Incentive program, as detailed in a July 1 letter to employees, assuming the employees satisfactorily complete their work assignments during their remaining days with Space Systems. The incentives will be made to salaried exempt and non-exempt and hourly employees.

For those work groups that continue on in San Diego, it is

*Continued on page 3*

important to understand that with this reduction-in-force many services will no longer be available or will be available on a limited basis. These include still photography, motion picture service, graphic support, public affairs, and legal. These services will become available in Denver or must be off-loaded to vendors locally. •

### Organizational Transition

**Di Nal Named VP of Technical Operations** — Martin Marietta Astronautics announced the appointment of Robert P. Di Nal as vice president of Technical Operations replacing G. Thomas Marsh who has been named president of Martin Marietta Manned Space Systems, headquartered in New Orleans, La.

"Bob Di Nal brings an enormous amount of experience and expertise to his new position," said James W. McAnally, president of Martin Marietta Astronautics. "Under his leadership, our technical operations will continue to be strong, ensuring that we achieve mission success on current programs and into the future."

Di Nal joined Astronautics May 2, 1994, when Martin Marietta acquired the Space Systems Division of General Dynamics where he served since 1989 as division vice president for research and engineering. In his new position, Di Nal will report to James W. McAnally, president of Astronautics. Di Nal joined the Convair division of General Dynamics in 1963 as an associate engineer. He progressed through a series of increasingly responsible positions, including engineering director of avionics for Convair and Space Systems.

A native of New York City, Di Nal earned a bachelor's degree in electrical engineering from Rensselaer Polytechnic Institute. He also received a master's degree in electrical engineering from San Diego State University and has done post-graduate work there and at the Kellogg Institute and the University of California at Los Angeles.

## Atlas Set to Launch INTELSAT 703 Satellite

A Martin Marietta Atlas rocket is set to launch the INTELSAT 703 communications satellite from Complex 36B, Cape Canaveral Air Station on October 5, 1994. The two-hour launch window extends from 1:53 to 3:53 a.m. EDT.

The commercial Atlas IIAS, designated AC-111, will launch the Space Systems/Loral-built satellite for INTELSAT, furthering the working partnership between Atlas and INTELSAT that dates back to the early 1970s. Atlas has launched a total of 22 successful missions for Intelsat, including 7 INTELSAT IVs, 5 IVAs, 6 Vs, 3 VAs and the INTELSAT K. INTELSAT 703 is the second of INTELSAT's newest generation of spacecraft to be deployed in the Pacific Ocean region. It joins INTELSAT's in-orbit fleet of 21 satellites providing broadcasting, telephone, and business communications services to its global network of 200 members.

Atlas IIAS is the most powerful of the four-variant Atlas family. Four strap-on Castor IVA solid rocket motors built by Thiokol enable the launch vehicle to lift payloads in the 7,000 to 8,000-

pound range. The 8,017-pound INTELSAT 703 will be placed into a geosynchronous transfer orbit of 16,559 nmi or higher.

This will be the fourth commercial Atlas launch this year and the second launch of the Atlas IIAS vehicle. Atlas successes in 1993 include AC-73/GOES 1 for NASA/NOAA, AC-76/UHF 3 for Hughes and the U.S. Navy, and AC-107/DBS-2 for DIRECTV. The balance of the 1994 manifest includes AC-110/Orion in mid-November, followed by AC-113/INTELSAT 704 in December. •

### AC-111 Viewing

The building 24 maxi-conference room will be open for employees to view the launch of AC-111 on Tuesday, October 4.

The gate will open at 10:30 p.m. The launch window opens at 10:53 p.m. PDT and stays open approximately two hours.

As launch day draws closer, call the Atlas Hot Line, 573-8769, for updates.

**John P. Grando**, Kearny Mesa Building 5 Site Director, has accepted a position with Greystone Technologies, Inc. Grando will remain in his current position until the delivery of AC-113 in mid-October, which coincides with his departure date.

**Michael C. Gass**, Plant 19 Site Director, will assume additional responsibilities as Kearny Mesa 5 Site Director. Gass' first priority will be to ensure the continuing delivery of the highest quality launch

vehicles to CCAS in time to meet our national and international customer requirements. Additionally, he will work closely with the Transition Team to ensure that production and production support tasks completing at Kearny Mesa 5 are properly transitioned to Denver, Plant 19 and Harlingen. Upon completion of the transition, Gass will remain the San Diego Operations Site Director, located at Plant 19. •

# Space Briefs

**Business News** — Martin Marietta continues to pursue strategies to enhance its leadership position in launch vehicles. We are working with a common engine buy for Atlas, which could use any of three engine candidates. The three engine candidates are the RD-180 from Energomash (Moscow), the NK-33 being sponsored by Aerojet, built by LIKUD (Samara, Russia) and the Rocketdyne MA5-C.

We entered a joint agreement with NPO Energomash in March of 1994 to begin concept design. Recently, we held a reception in Moscow celebrating the receipt by NPO Energomash of an export license to allow export of the RD-180 mock-up to come to the United States. In fact, the 9,200-pound, 13-foot-tall, 10-foot-wide mock-up is being housed in the LTSB building in the Denver Waterton Canyon facility.

Also in attendance at the reception were senior officials of TRANSMACH, who are experts in launch pad design and launch processing, and who have agreed to perform a study for us to help with our plan to reduce the span time to launch on Atlas/Centaur.

The RD-180 is a new, two-chamber version of the NPO Energomash RD-170 production engine, which powers the first stage of the Russian Zenit booster and the strap-on boosters for the SL-17 Energia. Space Systems is studying the RD-180, as well as other engines, for use on the Atlas launch vehicle.

"Because the 827,000-pound-thrust RD-180 can be throttled, it would eliminate the need for staging except when an upper stage is used," explained Mike Wynne, Space Systems Vice President and General Manager. "Several Russian engineers are going to be stationed in Denver to work with our engineers and to support the development activities of the RD-180 engine for Atlas."

NPO Energomash has designed, developed and operated more than

50 engines in 50 years. The company was founded in 1929 and is based in the Khimky Region of Moscow. NPO Energomash is a recognized leader in liquid propellant rocket engine design and development.

**TRANSMACH** — Martin Marietta has signed a Phase I contract with the Russian launch ground support operation, TRANSMACH. Under the study, TRANSMACH will work with Space Systems engineers to evaluate possible operability improvements to the Atlas pad and to vehicle erection methods. Four Russian engineers will be stationed at Cape Canaveral Air Station to support the study. •

## Computer Donations

As a reminder, Martin Marietta Space Systems and Computer Sciences Corporation (CSC) are continuing to donate obsolete computers to non-profit organizations within the community. Any employee who would like to be a sponsor of a computer donation should contact Tom Georgi at 974-4455. He will send you a small information packet detailing each step in the donation process.

Computers being donated include MAC Pluses, MAC SEs and some printers. They will be allocated on a first-come, first-served basis. If you know of a school or community organization in need, this may be your chance to help. •

## Travel Services

relocated from Kearny Mesa building 2 to building 24, second floor. Office hours are 7:30 a.m. to 4:15 p.m. All telephone numbers remain the same, with x47422 as the primary travel extension. If you have further questions, call Wayne Caswell at x47240. •

## FOR SALE

1978 Toyota Corolla, 2-dr, 5-sp., \$700. Craftsman air compressor. 1-hp, 8-gallon tank. Like new. \$100. Women's 10-sp Centurion bicycle. Like new. \$100. 565-4500. •

## Ethics Reminder

by Bill Bowersox, Business Ethics Representative

As the new business ethics representative for San Diego, I want each of you to know that Martin Marietta is committed to the highest standards of ethics. Recently a copy of the Martin Marietta Corporation "Code of Ethics and Standards of Conduct" was distributed to each of you. Please take the time to read this informative book.

**Ethics Hot Lines:** To report possible wrongdoing or to obtain clarification on ethical matters, please contact the Space Systems Ethics Hot Line at (619) 542-3200, the Corporate Ethics Hot Line at (407) 356-9400 or 1-800 3-ETHICS (338-4427), or the Denver Ethics Office at (303) 977-4530. •

*The Orbiteer is transitioning into a San Diego site-specific newsletter. News about Martin Marietta Space Systems products and people should be submitted to Astronautics News.*

### Astronautics News

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*Deadline for submission to Astronautics News is two weeks before the issue date. Astronautics News is published bi-weekly. Submitted articles will be printed as space permits, at the discretion of the editor. All submittals may be edited per space requirements.*

**MARTIN MARIETTA**

### Employment as of Sept. 23, 1994)

|                                  |              |
|----------------------------------|--------------|
| Cape Canaveral Air Station ..... | 500          |
| Commercial Launch Services ..... | 34           |
| GD Space Services .....          | 42           |
| Hammond .....                    | 23           |
| Harlingen .....                  | 224          |
| Huntsville .....                 | 20           |
| San Diego .....                  | 1860         |
| Vandenberg AFB .....             | 172          |
| <b>TOTAL.....</b>                | <b>2,875</b> |